

# **EXHIBIT A**

## IN THE CIRCUIT COURT OF Third Judicial Circuit, Madison County Illinois

## MADISON COUNTY, ILLINOIS

Ronald Poletti; Suzanna Blankenship; James )  
Tischhuaser; Jeffrey Tischhuaser; Gary Walker; )  
DelLee Zurliene; Timothy Kinnaman; Phillip )  
Nash; Kirby Lee Williams; Dave Shoot; Paul )  
Daily; Chris Nash; Terry Nash; Gary Dean )  
Cox; Robert Snider; Darrell Hinkle; Daniel )  
Rubin; Michael Buntin; James Alan Hood; )  
James Franklin Davis; Dane Smith; Benton )  
Weiler; Douglas Downs; Steven Weakly; )  
Raymond Rainwater; Kevin Babb; Dave )  
Zelhart; Mark Roberts; Roger Babb; Robert )  
Lakey; Patrick Morris; David Steward; Harold )  
Erlenbach; Edwin Summers; Alan Onken; Bret )  
Berg; Bruce Penning; James Hanson; Robert )  
Olson; Lyle Gertner; Stan Klassen; Douglas )  
Pohlman; Melvin Zuidema; Wayne Skaar; )  
Douglas Eisenmenger; Alan Schramm; Gene )  
Tapp; David Holst; John Opfe; Mark Altermatt; )  
Laurie Hoffbeck; Lanny Kiecker; Randy )  
Kramer; Gary Overgaard; Jack Boomgaarden; )  
Leroy Tweet; Ken Hoime; Jeff Thorson; Alvin )  
Boomgaarden; Bill Stein; Randall Pothen; )  
Richard Linscheid; Scott Lankow; James )  
Ferguson; Michael Butler; Edward Connell; )  
Virgil Mueller; Daniel Moser; Arlyn Baerg; Jay )  
Mugge; Brian Fairchild; Scott Brathauer; )  
Lance Shafer; Eric Vohs; David Forbes; Mark )  
Forbes; Todd Degen; Jeff Statema; Mark )  
Pedersen; Dave Muhlbauer; Nathan Vermeer; )  
Tracy Funk; Michael Rabe; David Richter; )  
Craig Kassel; Randy Loomis; Mark )  
Fredrickson; Marvin Johnson; Dallas Johnson; )  
Doug Tinnes; Duane Boehm; Randy Shatek; )  
Randy Horsley; Terry Ludwigs; Troy )  
Benjegerdes; Steven Erdman; Leon )  
Benjegerdes; Ray Stoner; Rodney Dietz; James )  
Locklear; Dan Bronnenberg; Duane Jackson; )  
Kyle Duane Jackson; Seth Phillip Myers; Chris )  
Cornelius; Gary Whallon; Patrick Worland; )  
Wayne Bothel; Rod Epping; Joel Starr; Michael )  
Thomas; Alan Hilt; Duane Siffring; Chris )  
Beaver; Thoams Vodicka; Ross Bauman; )  
Norman Hofer; James Hauser; Eric Nelson; )

CASE NO: \_\_\_\_\_

Mike Thompson; Kim Madsen; Dan )  
Schlaffman; Chris Baker; and Michael Rozell, )  
 )  
Plaintiffs, )  
 )  
vs. )  
 )  
SYNGENTA AG, SYNGENTA CROP )  
PROTECTION AG, SYNGENTA )  
CORPORATION, SYNGENTA CROP )  
PROTECTION, LLC, )  
SYNGENTA BIOTECHNOLOGY, INC. AND )  
SYNGENTA SEEDS, INC., )  
 )  
Defendants. )

**COMPLAINT**

COME NOW the Plaintiffs, by the undersigned attorneys, who bring this action against Defendants Syngenta AG, Syngenta Crop Protection AG, Syngenta Corporation, Syngenta Crop Protection, LLC, Syngenta Biotechnology, Inc. and Syngenta Seeds, Inc., (collectively "Defendants" or "Syngenta") and allege as follows:

**PLAINTIFFS**

1. Plaintiff Ronald Poletti is a resident of Madison County, Illinois. Plaintiff maintains a farm and farms corn in Madison County, Illinois.
2. Plaintiff Suzanna Blankenship is a resident of Bond County, Illinois. Plaintiff maintains a farm and farms corn in Bond County, Illinois.
3. Plaintiff James Tischhuaser is a resident of Bond County, Illinois. Plaintiff maintains a farm, JWT Farms, Inc, and farms corn in Bond County, Illinois.
4. Plaintiff Jeffrey Tischhuaser is a resident of Bond County, Illinois. Plaintiff maintains a farm, Tisch, Inc, and farms corn in Bond County, Illinois.
5. Plaintiff Gary Walker is a resident of Bond County, Illinois. Plaintiff maintains a

farm, William Walker Farms, Inc., and farms corn in Bond County, Illinois.

6. Plaintiff DelLee Zurliene is a resident of Bond County, Illinois. Plaintiff maintains a farm, Zurliene Farms, Inc., and farms corn in Bond County, Illinois.

7. Plaintiff Timothy Kinnaman is a resident of Clark County, Illinois. Plaintiff maintains a farm and farms corn in Clark County, Illinois.

8. Plaintiff Phillip Nash is a resident of Clark County, Illinois. Plaintiff maintains a farm and farms corn in Clark County, Illinois.

9. Plaintiff Kirby Lee Williams is a resident of Clark County, Illinois. Plaintiff maintains a farm and farms corn in Clark County, Illinois.

10. Plaintiff Dave Shoot is a resident of Coles County, Illinois. Plaintiff maintains a farm and farms corn in Coles County, Illinois.

11. Plaintiff Paul Daily is a resident of Coles County, Illinois. Plaintiff maintains a farm and farms corn in Coles County, Illinois.

12. Plaintiff Chris Nash is a resident of Coles County, Illinois. Plaintiff maintains a farm, Crooked Creek Farms, In., and farms corn in Coles County, Illinois.

13. Plaintiff Terry Nash is a resident of Coles County, Illinois. Plaintiff maintains a farm, Nash Grain Farm, Inc., and farms corn in Coles County, Illinois.

14. Plaintiff Gary Dean Cox is a resident of Douglas County, Illinois. Plaintiff maintains a farm and farms corn in Douglas County, Illinois.

15. Plaintiff Robert Snider is a resident of Douglas County, Illinois. Plaintiff maintains a farm and farms corn in Douglas County, Illinois.

16. Plaintiff Darrell Hinkle is a resident of Effingham County, Illinois. Plaintiff maintains a farm and farms corn in Effingham County, Illinois.

17. Plaintiff Daniel Rubin is a resident of Fayette County, Illinois. Plaintiff maintains a farm, Rubin's Dairy and Grain Farms, Inc., and farms corn in Fayette County, Illinois.

18. Plaintiff Michael Buntin is a resident of Franklin County, Illinois. Plaintiff maintains a farm, Buntin Brothers Farms, LLC, and farms corn in Franklin County, Illinois.

19. Plaintiff James Alan Hood is a resident of Franklin County, Illinois. Plaintiff maintains a farm, Hood Farms, and farms corn in Franklin County, Illinois.

20. Plaintiff James Franklin Davis is a resident of Livingston County, Illinois. Plaintiff maintains a farm, HBJ Davis farms, and farms corn in Livingston County, Illinois.

21. Plaintiff Dane Smith is a resident of Richland County, Illinois. Plaintiff maintains a farm and farms corn in Richland County, Illinois.

22. Plaintiff Benton Weiler is a resident of Richland County, Illinois. Plaintiff maintains a farm, Weiler Grain Farms LLC, and farms corn in Richland County, Illinois.

23. Plaintiff Douglas Downs is a resident of Shelby County, Illinois. Plaintiff maintains a farm and farms corn in Shelby County, Illinois.

24. Plaintiff Steven Weakly is a resident of Shelby County, Illinois. Plaintiff maintains a farm, Weakly Farms, Inc., and farms corn in Shelby County, Illinois.

25. Plaintiff Raymond Rainwater is a resident of Ogle County, Illinois. Plaintiff maintains a farm, Rainwater Farms, and farms corn in Ogle County, Illinois.

26. Plaintiff Kevin Babb is a resident of Champaign County, Illinois. Plaintiff maintains a farm and farms corn in Champaign County, Illinois.

27. Plaintiff Dave Zelhart is a resident of Macon County, Illinois. Plaintiff maintains a farm, Zelhart Farms, and farms corn in Macon County, Illinois.

28. Plaintiff Mark Roberts is a resident of Brown County, Illinois. Plaintiff maintains

a farm, Roberts Farms, and farms corn in Brown County, Illinois.

29. Plaintiff Roger Babb is a resident of Champaign County, Illinois. Plaintiff maintains a farm and farms corn in Champaign County, Illinois.

30. Plaintiff Robert Lakey is a resident of Champaign County, Illinois. Plaintiff maintains a farm, Lakey Farms, and farms corn in Champaign County, Illinois.

31. Plaintiff Patrick Morris is a resident of Boone County, Illinois. Plaintiff maintains a farm and farms corn in Boone County, Illinois.

32. Plaintiff David Steward is a resident of DeWitt County, Illinois. Plaintiff maintains a farm and farms corn in DeWitt County, Illinois.

33. Plaintiff Harold Erlenbach is a resident of DeKalb County, Illinois. Plaintiff maintains a farm and farms corn in DeKalb County, Illinois.

34. Plaintiff Edwin Summers is a resident of Henry County, Illinois. Plaintiff maintains a farm and farms corn in Henry County, Illinois.

35. Plaintiff Alan Onken is a resident of Lyon County, Minnesota. Plaintiff maintains a farm and farms corn in Lyon County, Minnesota.

36. Plaintiff Bret Berg is a resident of Dakota County, Minnesota. Plaintiff maintains a farm, Double B Farms, Inc., and farms corn in Dakota County, Minnesota.

37. Plaintiff Bruce Penning is a resident of Faribault County, Minnesota. Plaintiff maintains a farm and farms corn in Faribault County, Minnesota.

38. Plaintiff James Hanson is a resident of Brown County, Minnesota. Plaintiff maintains a farm, J&J Hanson Herefords, and farms corn in Brown County, Minnesota.

39. Plaintiff Robert Olson is a resident of Clay County, Minnesota. Plaintiff maintains a farm, Robert Olson Farms, Inc., and farms corn in Clay County, Minnesota.

40. Plaintiff Lyle Gertner is a resident of Cottonwood County, Minnesota. Plaintiff maintains a farm and farms corn in Cottonwood County, Minnesota.

41. Plaintiff Stan Klassen is a resident of Cottonwood County, Minnesota. Plaintiff maintains a farm and farms corn in Cottonwood County, Minnesota.

42. Plaintiff Douglas Pohlman is a resident of Jackson County, Minnesota. Plaintiff maintains a farm and farms corn in Jackson County, Minnesota.

43. Plaintiff Melvin Zuidema is a resident of Kandiyohi County, Minnesota. Plaintiff maintains a farm, Zuideam Farms, Inc., and farms corn in Kandiyohi County, Minnesota.

44. Plaintiff Wayne Skaar is a resident of Lyon County, Minnesota. Plaintiff maintains a farm and farms corn in Lyon County, Minnesota.

45. Plaintiff Douglas Eisenmenger is a resident of Martin County, Minnesota. Plaintiff maintains a farm and farms corn in Martin County, Minnesota.

46. Plaintiff Alan Schramm is a resident of McLeod County, Minnesota. Plaintiff maintains a farm, Schramm Farms, Inc., and farms corn in McLeod County, Minnesota.

47. Plaintiff Gene Tapp is a resident of Mower County, Minnesota. Plaintiff maintains a farm and farms corn in Mower County, Minnesota.

48. Plaintiff David Holst is a resident of Mower County, Minnesota. Plaintiff maintains a farm and farms corn in Mower County, Minnesota.

49. Plaintiff John Opfer is a resident of Olmsted County, Minnesota. Plaintiff maintains a farm, John Opfer Farm, and farms corn in Olmsted County, Minnesota.

50. Plaintiff Mark Altermatt is a resident of Redwood County, Minnesota. Plaintiff maintains a farm, Altermatt Farms, Inc., and farms corn in Redwood County, Minnesota.

51. Plaintiff Laurie Hoffbeck is a resident of Redwood County, Minnesota. Plaintiff

maintains a farm, Hoffbeck Holsteins, Inc., and farms corn in Redwood and Brown Counties, Minnesota.

52. Plaintiff Lanny Kiecker is a resident of Renville County, Minnesota. Plaintiff maintains a farm, and farms corn in Renville County, Minnesota.

53. Plaintiff Randy Kramer is a resident of Renville County, Minnesota. Plaintiff maintains a farm, RLK Farms, Inc., and farms corn in Renville County, Minnesota.

54. Plaintiff Gary Overgaard is a resident of Rock County, Minnesota. Plaintiff maintains a farm, Overgaard Farms, and farms corn in Rock County, Minnesota.

55. Plaintiff Jack Boomgaarden is a resident of Rock County, Minnesota. Plaintiff maintains a farm, and farms corn in Rock County, Minnesota.

56. Plaintiff Leroy Tweet is a resident of Rock County, Minnesota. Plaintiff maintains a farm, and farms corn in Rock and Nobles Counties, Minnesota.

57. Plaintiff Ken Hoime is a resident of Rock County, Minnesota. Plaintiff maintains a farm, Ken Hoime Farms, and farms corn in Rock County, Minnesota.

58. Plaintiff Jeff Thorson is a resident of Rock County, Minnesota. Plaintiff maintains a farm, Jeff Thorson Farms, and farms corn in Rock County, Minnesota.

59. Plaintiff Alvin Boomgaarden is a resident of Rock County, Minnesota. Plaintiff maintains a farm, and farms corn in Rock County, Minnesota.

60. Plaintiff Bill Stein is a resident of Stearnes County, Minnesota. Plaintiff maintains a farm, and farms corn in Stearnes County, Minnesota.

61. Plaintiff Randall Pothen is a resident of Swift County, Minnesota. Plaintiff maintains a farm, and farms corn in Swift County, Minnesota.

62. Plaintiff Richard Linscheid is a resident of Watonwan County, Minnesota.

Plaintiff maintains a farm, and farms corn in Watonwan County, Minnesota.

63. Plaintiff Scott Lankow is a resident of Wilkin County, Minnesota. Plaintiff maintains a farm, Lankow Farms, Inc., and farms corn in Wilkin County, Minnesota.

64. Plaintiff James Ferguson is a resident of Yellow Medicine County, Minnesota. Plaintiff maintains a farm, and farms corn in Yellow Medicine County, Minnesota.

65. Plaintiff Michael Butler is a resident of Faribault County, Minnesota. Plaintiff maintains a farm, and farms corn in Faribault and Martin Counties, Minnesota.

66. Plaintiff Edward Connell is a resident of Watonwan County, Minnesota. Plaintiff maintains a farm, and farms corn in Watonwan County, Minnesota.

67. Plaintiff Virgil Mueller is a resident of Fillmore County, Minnesota. Plaintiff maintains a farm, and farms corn in Fillmore County, Minnesota.

68. Plaintiff Daniel Moser is a resident of Pipestone County, Minnesota. Plaintiff maintains a farm, and farms corn in Lincoln County, Minnesota.

69. Plaintiff Arlyn Baerg is a resident of Cottonwood County, Minnesota. Plaintiff maintains a farm, Arlyn Baerg Farms, and farms corn in Cottonwood County, Minnesota.

70. Plaintiff Jay Mugge is a resident of Dickinson County, Iowa. Plaintiff maintains a farm, Mugge and Mugge Farms, Inc., and farms corn in Dickinson County, Iowa.

71. Plaintiff Brian Fairchild is a resident of Linn County, Iowa. Plaintiff maintains a farm, and farms corn in Linn County, Iowa.

72. Plaintiff Scott Bratthauer is a resident of Clinton County, Iowa. Plaintiff maintains a farm, and farms corn in Clinton County, Iowa.

73. Plaintiff Lance Shafer is a resident of Cherokee County, Iowa. Plaintiff maintains a farm, and farms corn in Cherokee County, Iowa.

74. Plaintiff Eric Vohs is a resident of Ida County, Iowa. Plaintiff maintains a farm, E Vohs Farm, and farms corn in Ida County, Iowa.

75. Plaintiff David Forbes is a resident of Ida County, Iowa. Plaintiff maintains a farm, Forbes Farms, Ltd., and farms corn in Ida County, Iowa.

76. Plaintiff Mark Forbes is a resident of Ida County, Iowa. Plaintiff maintains a farm, and farms corn in Ida County, Iowa.

77. Plaintiff Todd Degen is a resident of Sioux County, Iowa. Plaintiff maintains a farm, and farms corn in Sioux County, Iowa.

78. Plaintiff Jeff Statema is a resident of Sioux County, Iowa. Plaintiff maintains a farm, J&D Farms, and farms corn in Sioux County, Iowa.

79. Plaintiff Mark Pedersen is a resident of Kossuth County, Iowa. Plaintiff maintains a farm, and farms corn in Kossuth County, Iowa.

80. Plaintiff Dave Muhlbauer is a resident of Crawford County, Iowa. Plaintiff maintains a farm, and farms corn in Crawford County, Iowa.

81. Plaintiff Nathan Vermeer is a resident of Sioux County, Iowa. Plaintiff maintains a farm, Vermeer and Sons Farms, and farms corn in Sioux County, Iowa.

82. Plaintiff Tracy Funk is a resident of Mitchell County, Iowa. Plaintiff maintains a farm, and farms corn in Mitchell County, Iowa.

83. Plaintiff Michael Rabe is a resident of O'Brien County, Iowa. Plaintiff maintains a farm, Rabe Farms, and farms corn in O'Brien County, Iowa.

84. Plaintiff David Richter is a resident of O'Brien County, Iowa. Plaintiff maintains a farm, Richter Farms, Inc., and farms corn in O'Brien County, Iowa.

85. Plaintiff Craig Kassel is a resident of Palo Alto County, Iowa. Plaintiff maintains

farms, Kassel Farms, Inc., and Great Oak Farms, and farms corn in Palo Alto County, Iowa.

86. Plaintiff Randy Loomis is a resident of Palo Alto County, Iowa. Plaintiff maintains a farm, and farms corn in Palo Alto County, Iowa.

87. Plaintiff Mark Fredrickson is a resident of Worth County, Iowa. Plaintiff maintains a farm, and farms corn in Worth County, Iowa.

88. Plaintiff Marvin Johnson is a resident of Hancock County, Iowa. Plaintiff maintains a farm, and farms corn in Hancock County, Iowa.

89. Plaintiff Dallas Johnson is a resident of Hancock County, Iowa. Plaintiff maintains a farm, and farms corn in Hancock County, Iowa.

90. Plaintiff Doug Tinnes is a resident of Keokuk County, Iowa. Plaintiff maintains a farm, and farms corn in Keokuk County, Iowa.

91. Plaintiff Duane Boehm is a resident of Kossuth County, Iowa. Plaintiff maintains a farm, and farms corn in Kossuth and Faribault Counties, Iowa.

92. Plaintiff Randy Shatek is a resident of Chickasaw County, Iowa. Plaintiff maintains a farm, and farms corn in Chickasaw and Howard Counties, Iowa.

93. Plaintiff Randy Horsley is a resident of Woodbury County, Iowa. Plaintiff maintains a farm, and farms corn in Woodbury County, Iowa.

94. Plaintiff Terry Ludwigs is a resident of Plymouth County, Iowa. Plaintiff maintains a farm, and farms corn in Plymouth County, Iowa.

95. Plaintiff Troy Benjegerdes is a resident of Worth County, Iowa. Plaintiff maintains a farm, and farms corn in Worth County, Iowa.

96. Plaintiff Steven Erdman is a resident of Cherokee County, Iowa. Plaintiff maintains a farm, and farms corn in Cherokee County, Iowa.

97. Plaintiff Leon Benjegerdes is a resident of Worth County, Iowa. Plaintiff maintains a farm, and farms corn in Worth County, Iowa.

98. Plaintiff Ray Stoner is a resident of Linn County, Iowa. Plaintiff maintains a farm, and farms corn in Linn and Cedar Counties, Iowa.

99. Plaintiff Rodney Dietz is a resident of Bremer County, Iowa. Plaintiff maintains a farm, and farms corn in Bremer County, Iowa.

100. Plaintiff James Locklear is a resident of Robeson County, North Carolina. Plaintiff maintains a farm, and farms corn in Robeson County, North Carolina.

101. Plaintiff Dan Bronnenberg is a resident of Delaware County, Indiana. Plaintiff maintains a farm, and farms corn in Delaware County, Indiana.

102. Plaintiff Duane Jackson is a resident of Delaware County, Indiana. Plaintiff maintains a farm, and farms corn in Delaware County, Indiana.

103. Plaintiff Kyle Duane Jackson is a resident of Delaware County, Indiana. Plaintiff maintains a farm, and farms corn in Delaware County, Indiana.

104. Plaintiff Seth Phillip Myers is a resident of Hartford County, Indiana. Plaintiff maintains a farm, Phil Myers Family Farm, LLC, and farms corn in Hartford County, Indiana.

105. Plaintiff Chris Cornelius is a resident of Swift County, Indiana. Plaintiff maintains a farm, S&C Cornelius Farms, and farms corn in Swift County, Indiana.

106. Plaintiff Gary Whallon is a resident of Vigo County, Indiana. Plaintiff maintains a farm, and farms corn in Vigo County, Indiana.

107. Plaintiff Patrick Worland is a resident of Knox County, Indiana. Plaintiff maintains a farm, Worland Farms, LLC, and farms corn in Knox County, Indiana.

108. Plaintiff Wayne Bothel is a resident of DuPage County, Indiana. Plaintiff

maintains a farm, and farms corn in DuPage County, Indiana.

109. Plaintiff Rod Epping is a resident of Phelps County, Nebraska. Plaintiff maintains a farm, Epping Farms, Ltd., and farms corn in Phelps and Kearney Counties, Nebraska.

110. Plaintiff Joel Starr is a resident of Adams County, Nebraska. Plaintiff maintains a farm, Joel and James Starr Partnership, and farms corn in Adams County, Nebraska.

111. Plaintiff Michael Thomas is a resident of Saunders County, Nebraska. Plaintiff maintains a farm, and farms corn in Saunders and Douglas Counties, Nebraska

112. Plaintiff Alan Hilt is a resident of Lancaster County, Nebraska. Plaintiff maintains a farm, and farms corn in Lancaster and Saunders Counties, Nebraska.

113. Plaintiff Duane Siffring is a resident of Butler County, Nebraska. Plaintiff maintains a farm, Siffring Farms, Inc., and farms corn in Butler County, Nebraska.

114. Plaintiff Chris Beaver is a resident of Johnson County, Nebraska. Plaintiff maintains a farm, and farms corn in Johnson County, Nebraska.

115. Plaintiff Thoams Vodicka is a resident of Butler County, Nebraska. Plaintiff maintains a farm, and farms corn in Butler County, Nebraska.

116. Plaintiff Ross Bauman is a resident of Gage County, Nebraska. Plaintiff maintains a farm, and farms corn in Gage County, Nebraska.

117. Plaintiff Norman Hofer is a resident of Hutchinson County, South Dakota. Plaintiff maintains a farm, and farms corn in Hutchinson and McCook Counties, South Dakota.

118. Plaintiff James Hauser is a resident of Hutchinson County, South Dakota. Plaintiff maintains a farm, and farms corn in Hutchinson County, South Dakota.

119. Plaintiff Eric Nelson is a resident of Beadle County, South Dakota. Plaintiff maintains a farm, and farms corn in Beadle County, South Dakota.

120. Plaintiff Mike Thompson is a resident of Brookings County, South Dakota. Plaintiff maintains a farm, THO F.F., Inc., and farms corn in Brookings County, South Dakota.

121. Plaintiff Kim Madsen is a resident of Clark County, South Dakota. Plaintiff maintains a farm, Madsen Farms, LLC, and farms corn in Beadle, Clark and Spink Counties, South Dakota.

122. Plaintiff Dan Schlaffman is a resident of Davison County, South Dakota. Plaintiff maintains a farm, and farms corn in Davison County, South Dakota.

123. Plaintiff Chris Baker is a resident of Hand County, South Dakota. Plaintiff maintains a farm, and farms corn in Hand, Beadle and Hyde Counties, South Dakota.

124. Plaintiff Michael Rozell is a resident of Union County, South Dakota. Plaintiff maintains a farm, and farms corn in Union County, South Dakota.

125. Each Plaintiff claims actual damages exceeding \$75,000, exclusive of interest and costs.

#### **DEFENDANTS**

126. Defendant Syngenta AG is a corporation organized and existing under the laws of Switzerland with its principal place of business at Schwarzwaldallee 215, 4058 Basel-Stadt, Switzerland.

127. Defendant Syngenta Crop Protection AG is a corporation organized and existing under the laws of Switzerland with its principle place of business at Schwarzwaldallee 215, 4058 Basel-Stadt, Switzerland.

128. Defendant Syngenta Corporation (“Syngenta Corp.”) is a corporation organized and existing under the laws of the State of Delaware with its principal place of business located at 3411 Silverside Road # 100, Wilmington, Delaware 19810-4812. Syngenta Corp is a

subsidiary of Syngenta AG. Syngenta Corp does not have a registered agent in the State of Illinois and may be served with process under 735 ILCS 5/2-204 and 735 ILCS 5/2-208 by serving a copy of the complaint upon: Cheryl Quain (or successor), Corporate Secretary, Syngenta Corporation, 3411 Silverside Road, Suite 100, Shipley Building, Wilmington, Delaware 19810, and The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

129. Defendant Syngenta Crop Protection, LLC is a limited liability company organized and operating under the laws of the State of Delaware with its principle place of business at 410 South Swing Road, Greensboro, North Carolina 27409-2012. Syngenta Crop Protection, LLC may be served through its registered agent, CT Corporation System, 208 South LaSalle St., Suite 814, Chicago, IL, 60604. Upon information and belief, Syngenta Crop Protection, LLC was involved with the development and testing of the genetically modified corn trait MIR162 which is used in both VIPTERA corn and DURACADE corn.

130. Defendant Syngenta Biotechnology, Inc. ("Syngenta Biotech") is a Delaware corporation with a principal place of business at 3054 Cornwallis Road, Durham, North Carolina 27709. Prior to January 9, 2015, Syngenta Biotech was registered as a foreign corporation with the Illinois Secretary of State. However, as of January 9, 2015, Syngenta Biotech has withdrawn its registration with the Illinois Secretary of State. Accordingly, Syngenta Biotech may be served through either through its registered agent, CT Corporation System, 150 Fayetteville St., Box 1011, Raleigh, North Carolina 37601, or through the Illinois Secretary of State pursuant to 805 ILS § 5/13.45(a)(3). Upon information and belief, Syngenta Biotech was involved in the development of the genetically modified corn trait MIR162. Syngenta Biotech field tested under permits issued by or notifications to, and made application for deregulation by, the United States

Department of Agriculture ("USDA") of the genetically modified corn trait MIR162 which is used in both Agrisure VIPTERA® ("VIPTERA") corn and Agrisure DURACADE™ ("DURACADE") corn.

131. Defendant Syngenta Seeds, Inc. ("Syngenta Seeds") is a Delaware corporation with its principal place of business in Minnetonka, Minnesota. Syngenta develops and produces agricultural seeds, including, but not limited to, corn and soybean seeds, and in particular Viptera and Duracade. Syngenta Seeds conducts business throughout the United States, including Minnesota and Illinois. Specifically, Syngenta Seeds sells its agricultural seeds to growers either directly or through a network of dealers and distributors. Syngenta Seeds may be served through its registered agent, CT Corporation System, 208 South LaSalle St., Suite 814, Chicago, IL, 60604.

132. Upon information and belief, Defendants' acts were conducted in concert pursuant to an agreement amongst themselves to act in a collective manner. Therefore, and for the other reasons alleged, all Defendants are jointly and severally liable for the acts complained herein.

#### **JURISDICTION AND VENUE**

133. Plaintiffs incorporate by reference all preceding Paragraphs as though fully set forth herein.

134. The Plaintiffs make no claim under federal law. No federal question arises on their allegations. Plaintiffs expressly disclaim any federal cause of action that might otherwise be available to them.

135. Plaintiffs do not assert, and expressly disclaim, any claim based on a misrepresentation, omission, or failure to warn regarding the labeling or packaging of

Defendants' products. Plaintiffs do not seek to impose or continue in effect any requirements for labeling or packaging of the Defendants' products as described in the complaint.

136. There is no complete diversity of citizenship in this case. Multiple Plaintiffs reside in the State of Minnesota and are citizens of that state. Defendant Syngenta Seeds has its principal place of business in the State of Minnesota and is a citizen of that state, accordingly. Further, multiple Plaintiffs reside in the State of North Carolina and are citizens of that state. Defendants Syngenta Biotech and Syngenta Crop Protection, LLC have their principal places of business in the State of North Carolina and are citizens of that state, accordingly.

137. Multiple other Plaintiffs reside in and are citizens of the State of Illinois. Multiple Plaintiffs reside in and are citizens of states which are not contiguous to Illinois. These non-contiguous states of citizenship of multiple Plaintiffs are North Carolina, Minnesota, Nebraska, and South Dakota.

138. Jurisdiction is proper in Illinois pursuant to section 2-209 of the Illinois Code of Civil Procedure, 735 ILCS §§ 5/2-209(1) and (2) because each Defendant, separately and by acts concerted with the other Defendants, conducts business within this State and committed tortious acts within this State. The business and acts the Defendants engaged in in Illinois include, but are not limited to, (a) the promotion and sale of seeds in the state, including by their sales agents, (b) the use of "Syngenta Seed Advisors" to promote their products in the state, (c) the registration of agents for service of process in Illinois, and (d) the maintenance of physical facilities in Illinois to make, promote, and sell products inside the state and outside it. Each instance of such business and acts in Illinois constitutes purposeful availment by the Defendants of the general commerce of the state and of the farming market specifically, and each such instance was directed by the Defendants to farmers in Illinois. Each such instance was

undertaken by each Defendant for itself and as an agent for the other Defendants.

139. The tortious acts alleged in this Complaint occurred in pertinent part in Illinois, in counties of the state including Madison County, and also in the states of citizenship of the multiple Plaintiffs who reside in and are citizens of North Carolina, Minnesota, Iowa, Nebraska, Indiana and South Dakota, which are the states of citizenship of multiple Plaintiffs.

140. Venue is proper in Madison County pursuant to section 2-101 of the Illinois Code of Civil Procedure, 735 ILCS § 5/2-101, because it is the county of Illinois in which the Defendants' tortious acts occurred in pertinent part.

#### **JOINDER OF PLAINTIFFS**

141. Plaintiffs incorporate by reference all preceding Paragraphs as though fully set forth herein.

142. Joinder of the Plaintiffs in this matter is proper because the claims of all Plaintiffs arise out of closely related transactions, and there are significant questions of law or fact that are common to all the parties. All claims involve common questions regarding, *inter alia*, (a) Syngenta's decision to commercialize the MIR162 genetically modified corn trait in the absence of Chinese approval to import corn with that trait, (b) the Defendants' misrepresentations concerning Chinese approval, and (c) damages suffered by the Plaintiffs.

143. These significant questions of law and fact are common to all Plaintiffs, and the claims of all Plaintiffs are due to be tried together and jointly.

144. Other than those Plaintiffs who are resident citizens of the State of Illinois, whose cause of action and injuries arose in Illinois, the causes of action of the Plaintiffs arose in the state in which the Plaintiffs reside, and all injuries to those Plaintiffs occurred in the state in which those Plaintiffs reside.

**NATURE OF THE CASE**

145. Syngenta's conduct and fault is more fully described in exacting detail below, and as a consequence of the Defendants' actions Plaintiffs have suffered substantial damages, and their ability to profitably grow, cultivate, harvest and market corn is at great risk. By way of background, beginning in 2009, Syngenta released, prematurely, a genetically modified corn trait, MIR162, under the trade name Agrisure VIPTERA™ into the U.S. market. Syngenta's actions thereafter and as more specifically described herein caused the contamination of the entire U.S. corn supply with a genetic trait called MIR162. During all times relevant to this complaint, MIR162 was prohibited from sale in countries such as China where it was not approved for either purchase or consumption.

146. A substantial amount of the total U.S. corn crop, specifically including Illinois' corn production, is exported. The U.S. exports of corn amount to billions of dollars annually. Further, the U.S. corn marketing system is commodity-based, meaning the corn grown by farmers such as the Plaintiffs in Illinois and throughout the U.S. is harvested, gathered, commingled, consolidated, and otherwise shipped from thousands of farms from which it is cultivated, harvested and passed through local, regional, and terminal distribution centers. In order to maintain the stability of the corn marketing system and its integrity, it is essential that the U.S. corn supply and U.S. corn exports maintain the highest standards of purity and integrity. Prior to the incidents giving rise to this lawsuit, the U.S. corn market maintained a reputation for such purity and integrity. Due to Syngenta's premature release of VIPTERA corn, sale of U.S. corn previously exported to China ceased. During times relevant to this complaint, China refused to import U.S. corn grown, harvested and marketed by farmers and landowners such as the Plaintiffs.

147. Plaintiffs have incurred losses arising from the rejection of U.S. grown corn by export markets. They have sustained damage to their farmland and entire farming operations. And because the substantial portion of the U.S. corn crop is exported annually, the United States ability and limitations of corn exports deeply impacts corn price levels, including domestic prices in the corn market. Due solely to Syngenta's release of VIPTERA, Plaintiffs have incurred, and will continue to incur, substantial losses arising from the loss of export markets in amounts that have yet to be fully determined, but are far in excess of this Court's jurisdictional amounts for diversity jurisdiction.

148. Syngenta is, among other things, in the business of developing and selling in this district, in Illinois and throughout the U.S., corn seed with certain genetically modified traits. After development, Syngenta then licenses corn seed with multiple genetically enhanced features, called "trait stacks," to seed manufacturers, including Syngenta subsidiaries.

149. The primary focus of this case is Syngenta's corn containing the MIR162 trait, utilized in the VIPTERA and Agrisure DURACADE™ trait stacks. DURACADE is Syngenta's second generation of MIR162 corn and was released, sold and distributed for planting in 2014. Over seventy (70) varieties of corn utilize the MIR162 trait to produce a protein that results in insect resistance. These corn varieties are commonly referred to as VIPTERA corn and DURACADE corn, representing the particular traits the corn will express.

150. Plaintiffs' harm and consequent damages arise from Syngenta's intentional and reckless release of VIPTERA and DURACADE into the U.S. market prior to Syngenta obtaining approval for MIR162 import into China and other countries.

151. VIPTERA corn has been grown, licensed, marketed, sold, and/or otherwise disseminated in the United States since early 2009. During times relevant to this complaint,

crops or products containing MIR162 lacked approval for import into China (among other countries), and China refused to accept corn containing MIR162.

152. Although Syngenta, during times relevant to this complaint, lacked approval to import corn or other products containing MIR162 into China, it nevertheless misinformed farmers such as the Plaintiffs about that fact, as it similarly misinformed grain elevators, grain exporters, landowners, Syngenta's own investors, the farming community, and the general public -- leading all to believe, including these Plaintiffs, that approval from China was imminent. For example, during Syngenta's first quarter 2012 earnings conference call, Syngenta CEO Michael Mack stated "[t]here isn't outstanding approval for China, *which we expect to have quite frankly within the matter of a couple days . . . we know of no issue with that whatsoever . . .*" *Exhibit A*, Transcript of Syngenta's First Quarter 2012 Earning Conference Call Transcript (emphasis added).

153. Contrary to Syngenta's affirmative misstatements, MIR162 was not approved for import by China in 2012 and remained unapproved until December 2014.

154. Despite knowing MIR162 had not yet been approved for import into China, Syngenta created and distributed forms and documents that imply MIR162 is accepted in China. Syngenta's "Request Form for Biosafety Certificate Issued by the Chinese Ministry of Agriculture" states, "Biosafety Certificates for the following transgenic event(s) were issued to Syngenta Seeds AG . . . by the Ministry of Agriculture (MOA) of the People's Republic of China (PRC)." Syngenta's request form includes MIR162 among approved genetically modified traits, even though MIR162 was not at that time approved for import into China. *See Exhibit B*, Syngenta's Request Form For Biosafety Certificate(s) Issued by the Chinese Ministry of Agriculture.

155. *Exhibit B*, the Syngenta form, further states: "The requested Biosafety Certificates will be provided to Recipient to assist Recipient in obtaining required authorization for shipments containing the above marked Corn Product(s) into China." Syngenta's statement was flagrantly deceptive, and it deceived the Plaintiffs, because MIR162 had not yet been approved during the relevant time for import into China.

156. Plaintiffs, when the above statement was made, relied upon the statement and did not know it was untrue. This statement was not part of the product's packaging or labeling. It did not involve a warning concerning the product, but rather involved Syngenta's claims concerning the markets available to consumers choosing to plant Syngenta's product. Accordingly, Syngenta deceived the Plaintiffs by misleading them to believe that MIR162 had been approved for import into China, which was set to be one of the largest, if not the largest, importers of corn in the world.

157. In November 2013, shipments of corn containing MIR162 arrived in China. These shipments were rejected because MIR162 was present and not approved for import. Since this initial rejection and through, at least, December of 2014, China continued to reject shipments of corn due to the MIR162 contamination caused by Syngenta. In fact, the widespread nature of MIR162 contamination shut down, for all intents and purposes, the 2014 U.S. corn export market to China, causing billions of dollars of damages to U.S. exporters, including farmers, farm landowners and farming entities.

158. Upon information and belief, Syngenta knew the potential for catastrophic damage when unapproved traits are released prematurely. The NGFA and NAEWA advised:

U.S. farmers, as well as the commercial grain handling and export industry, depend heavily upon biotechnology providers voluntarily exercising corporate responsibility in the timing of product launch as part of their product stewardship obligation. Technology providers must provide for two critical

elements: First maintaining access to key export markets like China, or for that matter any market like China that has a functional, predictable biotech-approval process in place; for restricted marketability of their products based upon approval status in major markets. The negative consequences of overly aggressive commercialization of biotech-enhanced events by technology providers are numerous, and include exposing exporting companies to financial losses because of cargo rejection, reducing access to some export markets, and diminishing the United States' reputation as a reliable, often-preferred supplier of grains, oilseeds and grain products. Premature commercialization can reduce significantly U.S. agriculture's contribution to global food security and economic growth. Putting the Chinese and other markets at risk with such aggressive commercialization of biotech-enhanced events is not in the best interest of U.S. agriculture or the U.S. economy.

*Exhibit C, NGFA and NAECA Joint Statement on Media Reports of Lawsuit Involving Syngenta's Agrisure VIPTERA™ Corn (MIR162).*

159. According to the National Grain and Feed Association, Syngenta's premature release of VIPTERA corn cost the U.S. corn market a minimum of \$1 Billion - and up to \$3 Billion - due to the rejection and resulting seizures of U.S. containers and cargo ships transporting U.S. corn to China. *Exhibit D, Legal Obligations and Potential Market Impacts Associated with Biotech-Enhanced Seeds Producing Grain Not Approved for Import into US. Export Markets.*

160. Syngenta's motivation in prematurely releasing VIPTERA corn is purely profit driven, placing Syngenta's profits first and foremost ahead of the U.S. Corn interests, including but not necessarily limited to the Plaintiffs. Upon information and belief, VIPTERA corn is presently approximately 25% of Syngenta's corn portfolio. In 2013, Syngenta's corn sales were over \$3.5 billion. *Exhibit E, Syngenta's Annual Report, Form 20-F, Pg. 13, filed with the Securities and Exchange Commission on February 13, 2014.*

161. Syngenta nevertheless continued its irreparable damage to U.S. exports of corn to China, even though it either knew or should have known, or actually knew, that VIPTERA corn

would and had crippled exports of corn to China. Syngenta likewise knew or should have known of the devastating effect of its release of MIR162 because, as Syngenta stated in its Bio Product Launch Policy, "We will conduct market and trade assessments to identify key import markets for all of our biotech products prior to product commercialization." See, [www.sygentabiotech.com/biopolICY.aspx](http://www.sygentabiotech.com/biopolICY.aspx) (as of Sept. 11, 2014). Nevertheless, with such knowledge, Syngenta released its MIR162 in reckless disregard of the consequences from which malice may be inferred, and punitive damages should be assessed to punish Syngenta and deter others from such outrageous, selfish conduct in utter disregard of the damage to those such as the Plaintiffs.

162. Despite the above, Syngenta continued its conduct by releasing a second version of MIR162 corn, DURACADE, once again without import approval from China.

163. Concerned about another premature release and given the damage Syngenta singlehandedly caused to the corn export market with its premature release of VIPTERA corn, the National Grain and Feed Association ("NGFA") and North American Export Grain Association ("NAEGA") released a joint statement to Syngenta requesting that Syngenta stop the release of DURACADE corn, so that it would stop the cycle of rejection and damage.

164. In that statement, the two organizations stated:

NAEGA and NGFA are gravely concerned about the serious economic harm to exporters, grain handlers and, ultimately, agricultural producers - as well as the United States' reputation to meet its customers' needs - that has resulted from Syngenta's current approach to stewardship of VIPTERA. Further, the same concerns now transcend to Syngenta's intended product launch plans for DURACADE, which risk repeating and extending the damage. Immediate action is required by Syngenta to halt such damage.

*Exhibit F, Joint Statement Issued by NGFA and NAEGA Regarding Letter to Syngenta Requesting Suspension of Commercialization Activities of Syngenta's Agrisure VIPTERA® and*

DURACADE® Corn.

165. Yet, despite the joint petitions and pleas from the NGFA and NAEGA, Syngenta released DURACADE. This second premature release further jeopardized the Chinese import market, as DURACADE contains not only MIR162 which was still unapproved at that time, but also other traits unapproved at that time. Contamination of corn with these additional genetically modified ("GM") traits, as set forth more fully below, continued the Defendants' harm to U.S. corn shipments to China.

166. Plaintiffs are corn farmers in the business of owning and cultivation of farmland, planting, growing, and harvesting corn with the expectation of ultimately selling the corn they grow. Plaintiffs have been damaged, at least, by: 1) Syngenta's premature release of VIPTERA corn into the U.S. corn and corn seed supply which has destroyed the export of U.S. corn to China; 2) Syngenta's premature release of DURACADE corn into the U.S. corn and corn seed supply which, again, has effectively foreclosed U.S. exports of corn to China; 3) Syngenta's materially misleading statements relating to the approval status of MIR162 in China upon which Plaintiff relied or upon which Syngenta failed to disclose material facts that MIR162 was not approved in China; 4) and upon information and belief, Syngenta's widespread contamination of the U.S. corn and corn seed supply with MIR162 which will continue to result in the destruction of the U.S. corn export market to China for years to come.

167. Plaintiffs seek relief for compensatory, consequential, and punitive damages, and injunctive relief arising from, *inter alia*:

a. Syngenta's harm to Plaintiffs caused by contamination of the general U.S. corn and corn seed supply in the form of, *inter alia*, (i) inability to export corn to China, (ii) diminished corn and corn product prices resulting from the loss of the entire Chinese corn import market.

b. Syngenta's premature release of VIPTERA corn into the U.S. corn supply,

knowing that once VIPTERA corn was released, it would be commingled with and would contaminate the U.S. corn supply resulting in the inability to export to markets that had not approved products containing MIR162 (such as China);

c. Syngenta's encouragement of farmers to plant VIPTERA corn in such a manner that it would contaminate the U.S. corn supply, so that U.S. corn could not be sold to markets that had not approved products containing MIR162;

d. Syngenta's testing, growing, storing, transporting, selling, disposing, or otherwise disseminating VIPTERA corn in light of knowledge that it was essentially impossible to prevent contamination of other non-VIPTERA corn via cross-pollination;

e. Syngenta's testing, growing, storing, transporting, selling, disposing, or otherwise disseminating DURACADE corn in light of knowledge that it was essentially impossible to prevent contamination of other non- DURACADE corn via crosspollination;

f. Syngenta's selling or otherwise disseminating VIPTERA corn in light of knowledge that it was essentially impossible to prevent contamination of other non- VIPTERA corn via cultivation, harvesting, handling, storage, and transportation, resulting in damages from loss of sales and to equipment;

g. Syngenta's selling or otherwise disseminating DURACADE corn in light of knowledge that it was essentially impossible to prevent contamination of other non- DURACADE corn via cultivation, harvesting, handling, storage, and transportation; and

j. Syngenta's materially false statements and representations made regarding the regulatory-approval status of MIR162 and VIPTERA corn or, in the alternative, Syngenta used deception, fraud or false pretense, or through failure disclose material facts, through concealment or suppression of material facts, omission, deception, fraud or false pretense of material facts in connection with the regulatory-approval status of MIR162 and VIPTERA corn with the intent that the Plaintiffs rely upon their concealment, suppression or omission of material facts, all of which was a proximate cause of the Plaintiffs damages.

168. Syngenta made the conscious decision in reckless disregard of the consequences from which malice may be inferred that it was more profitable to speed VIPTERA to the market, maximize and extract a huge profit, and recoup its research costs, even though it knew the premature release of VIPTERA corn would prevent U.S. corn from being sold to markets such as China. By doing this, Syngenta crippled the 2013 and 2014 corn export markets to China. Further, on top of devastating the entire corn market and inflicting at least \$1 billion in economic

damage, Syngenta prematurely released another MIR162 corn hybrid, further devastating and inflicting widespread harm to the U.S. corn market, and all causing lost sales and income to the Plaintiffs.

### **FACTUAL ALLEGATIONS**

#### ***The United States Corn Export Market***

169. Corn is the most widely-cultivated grain crop in the U.S. The United States is a major player in the world corn trade market, and is the world's largest producer and exporter of corn. Approximately 80 million acres of farmland is devoted to growing corn. Nearly 20% of U.S. corn is exported to other countries.

170. The premature release of VIPTERA corn has hurt the U.S. corn market in many ways.

171. The NGFA estimated that the premature release of VIPTERA corn caused corn prices to decline by \$0.11 per bushel. *Exhibit G, Lack of Chinese Approval for Import of U.S. Agricultural Products Containing Agrisure VIPTERA™ MIR162: A Case Study on Economic Impacts in Marketing Year 2013/14.*

172. The U.S. corn marketing system, generally, is commodity-based and gathers, commingles, and ships corn from hundreds of thousands of farmers, including Plaintiffs, through local, regional, and terminal grain elevators. Grain elevators and other corn storage and transportation facilities are generally not equipped to test and segregate corn varieties, and to undertake testing and segregation at these facilities causes disruption and expense.

173. After rejections of U.S. corn by China started in late 2013, Plaintiffs corn prices plunged and continued downward.

174. VIPTERA corn was developed by Syngenta by using modern biotechnology

techniques. Syngenta modified the corn by inserting genetic material from a bacterium, *Bacillus thuringiensis* ("Bt"). Within the corn-biotechnology industry, corn manipulated in this fashion is commonly referred to as "*Bt corn*."

175. The specific genetic material inserted into the genome of VIPTERA corn allows the genetically altered corn to produce certain proteins including Cry1Ab, mCry3A, and Vip3A.

176. These proteins have insecticidal properties which, according to Syngenta, "controls more insects than any other trait stack on the market" including Black Cut Worm, Corn Earworm, European Corn Borer, Fall Armyworm, Western Bean Cutworm, and Stalk Borer.

177. VIPTERA's insecticidal protection comes from the Vip3A protein, a "vegetative insecticidal protein," which binds to the insect's midgut epithelium and forms pores, killing the insect before further crop damage may be done.

178. Syngenta invested approximately \$200 million and five to seven years developing VIPTERA corn.

179. Notably, VIPTERA corn is protected by Syngenta patent(s) giving Syngenta the right to exclude others from selling products with the VIPTERA corn traits. This is part of its motivation in pushing this product prior to approval from China (i.e., Syngenta is attempting to maximize its period of exclusivity when no others can sell VIPTERA corn).

180. As a bio-engineered product, VIPTERA corn was subject to U.S. and foreign regulatory approval prior to cultivation or import.

181. Syngenta had registered VIPTERA corn as a pesticide with the Environmental Protection Agency.

182. VIPTERA was deregulated by the U.S. Department of Agriculture in April 2010.

183. In the spring of 2010, Syngenta made the decision to release VIPTERA corn

commercially for the 2010/11 growing season. This release came at a time when VIPTERA corn lacked approval by import markets such as China, Japan, and the European Union.

184. At the time of release, Syngenta believed and reassured the public that approval in Japan and the European Union was imminent. Syngenta, however, was silent regarding China.

185. Japan and the European Union have since approved the importation of VIPTERA corn.

186. On December 22, 2014, Syngenta announced that it had "received the safety certificate for its Agrisure Viptera® trait (event MIR162) from China's regulatory authorities, formally granting import approval." See, <http://www.syngenta.com/global/corporate/SiteCollectionDocuments/pdf/media-releases/en/20141222-en-Viptera-China-approval.pdf> (last visited September 16, 2015). Despite knowing that it lacked approval to import its VIPTERA corn to China prior to December 2014, Syngenta at all relevant times prior to December 2014 encouraged farmers to grow VIPTERA corn.

#### *Contamination of the United States Corn Supply*

187. Commingling different varieties of corn is always a risk during planting, harvesting, drying, storage, and transportation of corn. Thus, once released, a corn variety will, without adequate protections, contaminate the broader corn supply.

188. Despite contamination risks, Syngenta offered farmers a "side-by-side program" which encouraged farmers to plant VIPTERA corn side-by-side with other corn seed.

189. Syngenta knew or should have known that encouragement of side-by-side planting of VIPTERA and non-VIPTERA corn would inevitably lead to commingling.

190. Syngenta knew or should have known that this commingling would result in rejected shipments of U.S. corn by Chinese regulatory officials.

191. In short, Syngenta knew or should have known of the high risk and consequences of commingling VIPTERA corn with the broader corn supply. Syngenta encouraged farmers to disregard practices designed to prevent commingling and encouraged side-by-side planting of VIPTERA and non-VIPTERA corn, essentially ensuring the contamination by commingling.

192. Corn replicates by cross-pollination from one plant to another. Pollen from corn has been shown to "drift" over considerable distances and cross-breed with corn from other plants.

193. The corn resulting from cross-pollination can express traits from the pollen-donating plant.

194. Those knowledgeable in the field suggest that, at a minimum, pollen can travel 200 feet. Some studies have found that cross-pollination cannot be eliminated, even at a distance of one third of a mile. *Exhibit H*, Peter Thomison, Managing "Pollen Drift" to Minimize Contamination of Non-GMO Corn, The Ohio State University Extension Fact Sheet, available at <http://ohioline.osu.edu/afy-fact/0153.html> (last visited Sept. 16, 2015).

195. Without adequate precautions, neighboring corn fields will exchange pollen.

196. The Thomison article states "[e]ach corn plant is capable of producing 4 to 5 million pollen grains." *Id.*

197. Further, the Thomison article states "even if only a small percentage of the total pollen shed by a field of corn drifts into a neighboring field, there is considerable potential for contamination through cross pollination." *Id.*

198. Syngenta, as a leader in the field of corn biotechnology, understood or should

have understood the effects of contamination by cross-pollination at the time of the release of VIPTERA corn.

199. Syngenta recognized in its "Agrisure™ Traits Stewardship Guide" that "[a] normal occurrence in corn production is cross-pollination ... " and "[i]t is not possible to achieve 100% purity of seed or grain in any corn production system and a certain amount of adventitious pollen movement will occur." *Exhibit I*, Syngenta 2011 Agrisure™ Traits Stewardship Guide.

200. Other seed producers agree. DuPont Pioneer published a fact sheet stating "Remember that achieving 100% purity is virtually impossible in seed or grain production." *Exhibit J*, DuPont Pioneer Maximizing Genetic Purity of Corn in the Field, available at <https://www.pioneer.com/home/site/us/agronomy/corn-specialty-markets/#genetics> (last visited Sept. 16, 2015).

201. Upon information and belief, Syngenta encouraged cross-pollinating of VIPTERA corn with non-VIPTERA corn and its "side-by-side program" because it knew that cross-pollination was certain to occur. Unfortunately, this led to additional contamination of the U.S. corn supply with the MIR162 trait.

202. To summarize, Syngenta knew that pollen drift was certain to occur and encouraged farmers to plant VIPTERA corn in a way that promoted cross-pollination and thus contamination of the U.S. corn supply.

#### ***VIPTERA – A Continuing Controversy***

203. After the 2011 planting season, but before the 2011 harvest season, Bunge North America, Inc. ("Bunge"), a grain elevator and handler based in St. Louis, Missouri, posted signs and distributed materials stating that VIPTERA corn would not be accepted during the harvest season.

204. Bunge cited the lack of Chinese import approval as its reason for not accepting VIPTERA corn.

205. In response, Syngenta sued Bunge in the Northern District of Iowa, seeking, inter alia, preliminary and permanent injunctions requiring Bunge to stop posting materials regarding its refusal to accept VIPTERA corn, and, more importantly, requiring Bunge to accept VIPTERA corn at its facilities. Complaint, *Syngenta Seeds, Inc., v. Bunge North America, Inc.*, No. 5:11-cv-04074-MWB, (N.D. Iowa Aug. 22, 2011) ECF No. 1.

206. Bunge responded to the lawsuit stating" ... we are surprised and disappointed that Syngenta has taken an action which could put at risk a major export market for U.S. corn producers [-] China." Further, in the same statement, Bunge made clear:

Bunge's decision not to accept Agrisure VIPTERA is consistent with the North American Export Grain Association's (NAEGA) policy to advocate that technology providers receive all major international approvals for a trait prior to seed sales. The grain export industry, which includes Bunge, notified Syngenta more than a year ago that China is considered a major export market.

*Exhibit K*, Statement of Soren Schroder, President and CEO of Bunge North America, <https://www.bungenorthamerica.com/news/28-bunge-responds-to-syngenta-suit> (last visited September 16, 2015).

207. Syngenta's request for a preliminary injunction was denied. Memorandum Opinion and Order: Denying Motion for Preliminary Injunction, *Syngenta Seeds, Inc., v. Bunge North America, Inc.*, No. 5:11-cv-04074-MWB, (N.D. Iowa Sept. 26, 2011) ECF No. 42.

208. Major grain handlers including Bunge, Archer Daniels Midland, Cargill, and Consolidated Grain and Barge refused to accept VIPTERA corn, because preventing commingling is essentially impossible.

#### *The Chinese Imports Market*

209. In the past, Japan and Canada were considered the major corn import markets. Accordingly, many biotech-trait commercialization decisions were made based on approval obtained from these two countries.

210. However, in recent years, China has become a major importer of corn and corn products. A recent study by the USDA shows that during the 2012/13 import year China imported five times more corn than Canada.

<http://www.usda.gov/oce/commodity/wasde/latest.pdf> (last visited Sept. 16, 2015).

**Table 1**  
**Corn Imports by Country by Trade Year**  
**(Thousand Metric Tons)**

	2009/10	2010/11	2011/12	2012/13	2013/14 (estimated)
<b>Japan</b>	15,971	15,648	14,892	14,412	15,500
<b>China</b>	1,296	979	5,231	2,702	3,500
<b>Canada</b>	2,100	950	870	480	400

Data compiled from USDA World Agricultural Supply and Demand Estimates available at <http://www.usda.gov/oce/commodity/wasde/>

211. China, having not approved the importation of VIPTERA corn during the relevant time period, maintained a strict zero tolerance policy regarding contamination of corn imports with corn containing MIR162.

212. This means that any detection of MIR162 in a shipment to China could result in rejection of that shipment.

213. Syngenta had knowledge of China's zero-tolerance policy prior to the commercialization of VIPTERA corn.

214. Further, Syngenta had knowledge that there was no means of detecting a "zero" level of MIR162 in a given sample. At least, Charles Lee - Syngenta's North American Head of Corn - stated, when asked about potential detection methods, "Yeah, nothing can detect to zero."

*Exhibit L*, Deposition of Charles R. Lee - Sept. 7, 2011, Syngenta Seeds, Inc., v. Bunge North America, Inc., No. 5:11-cv-04074-MWB, (N.D. Iowa Sept. 15, 2011) ECF No. 32-6, 92:21. In other words, there is always a risk that if a corn shipment is tested in the U.S. and is negative for MIR162, a second test at port could result in a positive for MIR162.

215. Even further, when questioned about the decision-making process to commercialize VIPTERA corn, Mr. Lee stated that commercialization was premised on U.S. deregulation and Japanese and Canadian approval. *Id.* at 82:15-20.

216. Mr. Lee stated in his deposition "we operate on the principle that we need U.S., Japan and Canada. And so once we have those approvals, we do commercialization of the product . . ." *Id.* at 90:10-13.

217. Therefore, Syngenta recognized that it is improper to rush a product to market without first receiving approvals from certain other countries to which U.S. corn is exported. Despite this knowledge, it did not wait for Chinese approval.

218. There was no requirement that Syngenta commercialize VIPTERA corn at this time. However, as stated by Mr. Lee, Syngenta was "trying to recoup [its] costs as an organization." Further, Syngenta "[l]ike anybody, [wanted] to derive some income from [its] products." *Id.* At 70:22-71:13.

219. Syngenta also commercialized VIPTERA corn before major market approval for another reason: "[y]ou have to operate in the nongeneric period [of Syngenta's patent covering VIPTERA corn]. You like to optimize that period." *Id.* at 72:3-6.

220. On or about November 2013, cargo shipments of U.S. corn were rejected by Chinese regulatory officials after testing positive for VIPTERA corn.

221. On December 24, 2013, the General Administration of Quality Supervision,

Inspection and Quarantine of China issued a warning notification strengthening the inspection and supervision for the import of GMO feed materials. This notification stated the impetus was that the Shanghai Chinese Inspection and Quarantine Service ("CIQ") had detected MIR162. The December 24 notification indicated that all batches of corn would now be tested at the Chinese ports for MIR162, and that any cargo which tested positive for MIR162 would be returned or destroyed.

222. After this notification, corn transactions were at increased risk.

223. Also, since China initially only required certification from the seller/exporter that the shipped corn did not contain MIR162, a negative test result from the seller/exporter was sufficient. This allowed predictability in that customers in China would know from the beginning of a contract that the corn products would clear Chinese customs.

224. Now that testing occurred at Chinese ports, an increased risk was placed on export contracts, because, as Syngenta testified, there was no way to detect a "zero" level of MIR162 (i.e., a negative test of a container in the U.S. could still result in a positive test in China). This caused an initial amount of Chinese customers to walk away from their contracts, placed great deal of uncertainty on the market, and dramatically hurt corn prices.

225. An increased frequency of corn shipments were testing positive, and in July 2014, China again strengthened its policy regarding MIR162.

226. Since November of 2013 (i.e., the positive tests for MIR162 in China), Chinese imports for U.S. corn have fallen by an estimated 85%.

227. This market shift came at a time when China was expected to import a record high 7 million tons of U.S. corn, according to estimations made by the U.S. Department of Agriculture.

228. The rejection of U.S. corn imports has and continues to negatively impact the global corn market.

229. Syngenta knew or should have known that disruption to the Chinese import market would influence the global corn market.

230. Syngenta knew or should have known that contracts between grain exporters and Chinese corn buyers would be negatively affected if MIR162 was found in grain exports to China.

***Syngenta's Admissions Regarding MIR162***

231. Syngenta knew or should have known of the damage that the rejection of corn by China would cost. For example, the unrebutted evidence at the hearing on Syngenta's Motion for Preliminary Injunction indicated that the redirection costs for a rejected shipment of contaminated corn could be anywhere from \$4 million to \$20 million for a single shipment. Memorandum Opinion and Order Regarding Plaintiff Motion for Preliminary Injunction, *Syngenta Seeds, Inc., v. Bunge North America, Inc.*, No. 5:11-cv-04074-MWB, (N.D. Iowa Sept. 26, 2011) ECF No. 42, at 12 (emphasis added).

232. Syngenta also knew or should have known that releasing MIR162 prior to Chinese approval would affect corn prices.

233. In Syngenta's 2010 Full Year Results, CEO Michael Mack ("Mr. Mack") stated that Chinese "import requirements alone influence global commodity prices." *Exhibit M*.

234. During Syngenta's 2011 Half Year Earnings Report, Mr. Mack again commented on the importance of the Chinese market, stating that China "continues to have the greatest impact on world markets, with increasing imports not just of soybeans but also now of corn." *Exhibit N*.

235. In response to a question during the first quarter 2012 earnings conference call regarding the status of Chinese approval of VIPTERA, Mr. Mack stated "[t]here isn't outstanding approval for China, which we expect to have quite frankly within the matter of a couple days . . . we know of no issue with that whatsoever . . ." *Exhibit A*.

236. Yet as set forth in the preceding paragraphs: the CEO of Syngenta publicly stated in 2012 that approval of VIPTERA was days away.

237. Mr. Mack's statement was made as an advertisement for VIPTERA corn.

238. Mr. Mack referred specifically to VIPTERA corn.

239. Mr. Mack had an economic motivation for making this statement—continued sales of VIPTERA corn.

240. Mr. Mack's statement was disseminated sufficiently to constitute promotion within the grain industry. His statement, and others like it, dangerously impacted the corn market by, for example, encouraging 1) farmers to plant MIR162, 2) grain elevators to accept and comingle MIR162 with other grains, and 3) exporters to purchase and ship products containing MIR162.

241. Obviously, Syngenta was incorrect with its prediction that Chinese approval would come in just a "matter of a couple days."

242. In 2014, Syngenta knew or should have known that China would not approve MIR162 in time for 2014 planting. For example, Mr. Mack stated during Syngenta's first quarter 2014 conference call "I think it is fair to say at this point in time that we don't have—that we will not have any approval before the start of the season. That's for sure." *Exhibit O*.

243. During Syngenta's 2014 second quarter earnings conference call Mr. Mack made the following statements regarding Chinese approval of VIPTERA corn:

You ask about VIPTERA and our regulatory issues. Actually, I think this is a regulatory matter in China as opposed to any regulatory matter with Syngenta. The delays coming out of China are such that people just aren't really understanding right now even what the process is.

We don't have it in hand and I wouldn't want to say any more about when we might have it in hand, beyond to say that there is no question; there is no technical question right now waiting from the Chinese about it, and it's been approved already in virtually every other market. So, we'll see what happens over the coming weeks, months, quarters.

*Exhibit P.*

244. This statement confirms that Syngenta recognized that there was no end in sight for problems with exports to China due to its MIR162 products. Despite this, Syngenta continued to sell MIR162 products, as well as launch new GMO products, none of which were approved by China during the relevant time period. In doing so, Syngenta knew or should have known that its MIR162 products would continue to destroy U.S. exports of corn to China.

245. Further, and despite its 2014 statements as to uncertainty in China, Syngenta misled exporters into believing products containing MIR162 would be accepted in China.

246. Syngenta, currently and during much of the relevant time period, published on its website a form entitled "Request Form for Biosafety Certificate Issued by the Chinese Ministry of Agriculture." *See*, e.g., <http://www3.syngenta.com/country/us/en/agriculture/Stewardship/Documents/Biosafety-Certificate-Request-Form.pdf> (last visited Sept. 16, 2015).

247. This form states, "Biosafety Certificates for the following transgenic event(s) were issued to Syngenta Seeds AG . . . by the Ministry of Agriculture (MOA) of the People's Republic of China (PRC)." One of the "transgenic event(s)" listed on this Syngenta form is MIR162.

248. The Syngenta form continues, "The requested Biosafety Certificates will be

provided to Recipient to assist Recipient in obtaining required authorization for shipments containing the above marked Corn Product(s) into China," and additionally states, "The Biosafety Certificate(s) provided allows importation of the above marked Corn Product(s) as raw materials for processing for food and feed use only, not for any research purpose or cultivation purpose."

249. The implication of this form is clear: if completed (by, for example, an exporter), Syngenta will issue Biosafety Certificates, which will ensure the cargo can enter into China.

250. Syngenta's request form was released as an advertisement for VIPTERA corn, as it indicates that products containing MIR162 may be imported into China.

251. Syngenta's request form refers specifically to MIR162, the key trait in VIPTERA corn.

252. Syngenta had an economic motivation to include MIR162 on its request form, even though Syngenta knew MIR162 was not approved for import into China at the time: to maximize the length of time it could exclusively sell corn containing MIR162 under its various patents.

253. Syngenta's form was disseminated sufficiently to constitute promotion within the seed sales industry.

254. The statements made by Syngenta officials above show Syngenta knew that while the other Corn Products/transgenic events identified on this form were approved in China, MIR162 was not.

**PLAINTIFFS' CLAIMS FOR RELIEF**

**COUNT I  
PUBLIC NUISANCE  
(As to all Plaintiffs)**

255. Plaintiffs incorporate by reference all preceding Paragraphs as though fully set forth herein.

256. Through the conduct alleged above, Syngenta has created a public nuisance by causing widespread contamination of the U.S. corn supply with the MIR162 trait.

257. This unreasonable interference is imposed on the community at large and on a considerable diverse number of persons and entities. It arises from Syngenta's testing, growing, storing, transporting, selling, disposing, or otherwise disseminating VIPTERA corn: (a) without adequate precautions to prevent contamination of the U.S. corn and corn seed supplies; (b) with the knowledge that VIPTERA corn would contaminate other corn; (c) with the knowledge that this contamination would likely affect the U.S. corn and corn seed supplies; or (d) with the knowledge that there was a substantial risk of contamination of corn and corn seed supplies earmarked for export.

258. Syngenta has unreasonably interfered with the public's right to expect compliance with the federal laws governing the testing, growing, storing, transporting, selling, disposing, or otherwise disseminating VIPTERA corn. Syngenta has further unreasonably interfered with the public's right to expect that the corn sold to the general public is free from contamination with VIPTERA corn as well as the public's right to be notified of whether the corn sold to the public is contaminated with genetically-modified organisms—including corn containing MIR162—so that the public has the freedom to choose to purchase and consume non-contaminated corn.

259. This interference is unreasonable in that it involves a significant interference with the public health, the public safety, the public peace, the public comfort, or the public convenience. It is also unreasonable in that it is proscribed by law, is of a continuing nature, and has produced a permanent or long-lasting effect.

260. Plaintiffs have suffered harm caused by Syngenta's public nuisance distinct from and different than that suffered by the general public in that, as described above, they have suffered business losses in the form of, among other things, the rejection of the crops by certain export markets, namely China.

261. This constitutes an unreasonable and substantial interference with rights common to the general public, restricted demand for their products and services in certain markets; and reduced prices for their corn in all markets.

262. In light of the surrounding circumstances, Syngenta knew or should have known that their conduct would naturally or probably result in injuries and damages to the Plaintiffs. Nevertheless, Syngenta continued such conduct in reckless disregard of or conscious indifference to those consequences from which malice may be inferred and, consequently, punitive damages should be assessed to punish and deter.

**COUNT II**  
**PRIVATE NUISANCE**  
**(As to all Plaintiffs)**

263. Plaintiffs incorporate by reference all preceding Paragraphs as though fully set forth herein.

264. Syngenta has created a private nuisance through the sale and distribution of Viptera corn. Syngenta licensed, sold, and distributed Viptera corn negligently and/or intentionally, without regard for the cross-pollination that results when Viptera corn pollen drifts to neighboring, non-Viptera fields. As a result, the entire U.S. corn farming and production chain, including, but not limited to, farmland, farming equipment, storage facilities, harvesting equipment, and transportation facilities and equipment of Plaintiffs are contaminated with Viptera. The interference caused by the pollen drift has been material, substantial and

unreasonable such to cause a nuisance to exist.

265. Syngenta's acts or omissions interfered with the use and enjoyment of Plaintiffs' rights, comfort, and convenience.

266. The interference with the use and enjoyment of the property caused by Syngenta is substantial, unreasonable, and ongoing and is imposed not just on Plaintiffs but on a considerable number of individuals and entities. Plaintiffs, though, have suffered injuries distinct from the general public in that Plaintiffs have suffered and continue to suffer business losses in the form of reduced or restricted demand for Plaintiffs' crops, reduced prices for Plaintiffs' crops, and diminution in value of Plaintiffs' corn harvesting.

267. Syngenta's acts and omissions are the direct and proximate cause of the damages suffered by Plaintiffs.

**COUNT III**  
**COMMON LAW NEGLIGENCE**  
**(As to all Plaintiffs)**

268. Plaintiffs incorporate by reference all preceding Paragraphs as though fully set forth herein.

269. With respect to its testing, growing, storing, transporting, selling, disposing, or otherwise disseminating VIPTERA corn, Syngenta had a duty to utilize its professional expertise and exercise that degree of skill and learning ordinarily used under the same or similar circumstances by a person or entity in Syngenta's business.

270. Syngenta breached its duty by acts and omissions including but not limited to:

- a. Prematurely commercializing VIPTERA and DURACADE on a widespread basis without reasonable or adequate safeguards;
- b. Instituting a careless and ineffective "stewardship" program, which ensured contamination of the U.S. corn supply;

- c. Failing to enforce or effectively monitor its stewardship program;
- d. Selling VIPTERA and/or DURACADE to thousands of corn farmers with knowledge that they lacked the mechanisms, experience, ability and/or competence to effectively isolate or “channel” those products;
- e. Distributing misleading information about the importance of the Chinese market; and
- f. Distributing misleading information regarding the timing of China’s approval of VIPTERA and/or DURACADE.

271. Upon information and belief, Syngenta further breached their duty by failing to notify the appropriate regulatory bodies and the public in a timely fashion after it first learned of the contamination of the U.S. corn supply with MIR162.

272. The damages incurred by Plaintiffs were or should have been foreseen by Syngenta as Syngenta understood the risks of releasing VIPTERA corn, including but not limited to, the near certainty of cross-pollination, risks of intentional or unintentional commingling of VIPTERA corn with non-VIPTERA corn, China’s zero-tolerance policy for MIR162, and China’s large, and growing, U.S. corn import market.

273. Syngenta breached its duties, as alleged above and breached the requisite standard of care owed to Plaintiffs, and was therefore negligent.

274. Syngenta’s breaches are a direct and proximate cause of the injuries and damages sustained by the Plaintiffs in amounts not yet fully determined but far in excess of any amounts necessary for diversity jurisdiction.

275. Syngenta’s conduct was willful, wanton and in reckless disregard for the rights of others, including the Plaintiffs.

**COUNT IV**  
**PRODUCTS LIABILITY**  
**(As to all Plaintiffs)**

276. Plaintiffs incorporate by reference all preceding Paragraphs as though fully set forth herein.

277. Syngenta was and continues to be a supplier of VIPTERA and/or DURACADE corn.

278. Syngenta has in the past and continues to manufacture, sell, or otherwise distribute VIPTERA and/or DURACADE corn.

279. VIPTERA and/or DURACADE corn was used in a manner reasonably anticipated.

280. As a direct and proximate result of the defective and unreasonably dangerous condition of VIPTERA and/or DURACADE corn as it existed when it left Syngenta's control, the Plaintiffs have sustained injuries and damages as alleged above.

281. In light of the surrounding circumstances, Syngenta knew or should have known that their conduct would naturally or probably result in injuries and damages to the Plaintiffs, yet continued such conduct in reckless disregard for the consequences from which malice may be inferred and, accordingly, punitive damages should be imposed to both punish and deter.

282. Syngenta's VIPTERA and/or DURACADE corn is the direct and proximate cause of the injuries and damages sustained by the Plaintiffs.

**COUNT V**  
**TORTIOUS INTERFERENCE WITH BUSINESS ACTION**  
**(As to all Plaintiffs)**

283. Plaintiffs incorporate by reference all preceding Paragraphs as though fully set forth herein.

284. Plaintiffs had business relationships whereby Plaintiffs would sell their corn to grain purchasers. These business relationships were memorialized by invoices, receipts, and other documents showing a consistent course of sales.

285. Plaintiffs had a reasonable expectation of economic gain resulting from the relationships with their grain purchasers. Plaintiffs reasonably expected to continue to sell corn from their farms to such companies, and that the price at which they would be able to do so would be based on marketplace conditions and would not be adversely affected by the contamination of the U.S. corn supply with corn seed products that were not approved in all major export markets. Plaintiffs rightfully maintained the expectation that such business relationships would continue in the future.

286. Syngenta knew that Plaintiffs and other farmers had business relationships with such grain elevators and supply companies in the normal chain of crop export and sales, and Syngenta was fully aware that Plaintiffs and other farmers expected these business relationships to continue in the future.

287. Despite this knowledge, Syngenta made representations that deceived farmers and other consumers as to whether grain elevators and other supply companies would accept MIR162 corn, and deceived farmers and other consumers regarding the negative impact of MIR162 on U.S. corn prices. These misrepresentations stated that MIR162 corn is or would imminently be approved for import into China.

288. Syngenta interfered with these prospective future business relationships through its conscious decision to bring MIR162 corn to the market. Syngenta knew, or should have known, that releasing MIR162 corn would lead to the contamination of all U.S. corn shipments and prevent U.S. corn from being sold in China, which had not granted import approval.

289. Syngenta's release of MIR162 corn destroyed the export of U.S. corn to China and caused depressed prices for all domestic corn producers. Thus, Plaintiffs have been unable to sell their corn to grain elevators and supply companies at the price they reasonably expected to

receive.

290. Syngenta intentionally interfered with Plaintiffs' prospective business relationships; and Syngenta knew the interference was certain or substantially certain to occur as a result of its conduct in releasing MIR162 corn into the U.S. market.

291. Plaintiffs have been proximately damaged and continue to be damaged as a result of Syngenta's interference.

292. Syngenta's tortious conduct serves as a direct and proximate cause of the injuries and damages sustained by Plaintiffs.

**COUNT VI  
STRICT LIABILITY**

**(As to Plaintiffs from Illinois, Indiana, Iowa, Minnesota, Nebraska and South Dakota)**

293. Plaintiffs incorporate by reference all preceding Paragraphs as though fully set forth herein.

294. Syngenta developed and distributed Viptera corn seed, a defective and unreasonably dangerous product that, when used as anticipated, produced corn that has not been approved for human consumption by China and the European Union.

295. The sale and distribution of Viptera corn resulted in the contamination of the U.S. grain production and handling system, causing export markets to restrict, or ban altogether, importation of U.S. corn. Exercise of reasonable care could not have eliminated the risk of such contamination and resulting injuries.

296. Given the structure and operation of the U.S. grain production and handling system, Syngenta's sale and distribution of Viptera corn was improper.

297. Any benefit derived from the cultivation of Viptera corn is greatly outweighed by the harm resulting from Viptera contamination of the U.S. corn supply.

298. Plaintiff seeks compensatory damages and all costs and fees as allowed by law.

**COUNT VII**  
**ILLINOIS CONSUMER FRAUD AND DECEPTIVE BUSINESS PRACTICES ACT**  
**(As to all Illinois Plaintiffs)**

299. Plaintiffs incorporate by reference all preceding Paragraphs as though fully set forth herein.

300. Corn seed such as VIPTERA and DURACADE is an object, good, and/or commodity constituting merchandise pursuant to 815 Ill. Comp. Stat. 505/1.

301. Syngenta engaged in numerous unfair acts or practices in the timing, scope and terms under which it commercialized VIPTERA and DURACADE, including, but not limited to:

- a. Prematurely commercializing VIPTERA and/or DURACADE on a widespread basis without reasonable or adequate safeguards;
- b. Instituting a careless and ineffective “stewardship” program;
- c. Failing to enforce or effectively monitor its “stewardship” program; and
- d. Selling VIPTERA and/or DURACADE to thousands of corn farmers with knowledge that they lacked the mechanisms, experience, ability and/or competence to effectively isolate or “channel” those products.

302. Syngenta’s practices, as set forth above, were unfair in that:

- a. The practices offend public policy in that they were done negligently, were done in a manner that brought VIPTERA and/or DURACADE in contact with the Illinois Plaintiffs’ and other Illinois State Corn Producers Class members’ corn thereby resulting in a trespass to chattels, and/or violated industry recognized stewardship obligations;
- b. The practices were immoral, oppressive and unscrupulous in that they imposed no meaningful choice on corn farmers, imposed an unreasonable burden on the corn farming industry and was so oppressive as to leave corn farmers with little alternative but to submit to the practices. Corn farmers had no control over the closure of the Chinese market due to the commercialization of VIPTERA and/or DURACADE; had no reasonable ability to prevent VIPTERA and/or DURACADE from entering onto their land, into their corn or into the corn market, and had no reasonable ability to separately channel their corn and VIPTERA and/or DURACADE; and

- c. The practices caused substantial injury to corn farmers in that it caused the loss of the Chinese export market and reduced corn prices. Corn farmers cannot reasonably avoid the injury caused by Syngenta's actions because the actions have caused a drop in the price for all U.S. corn.

303. Syngenta's unfair practices and conduct was directed toward consumers of VIPTERA and DURACADE as well as other corn producers. Syngenta intended consumers of VIPTERA and DURACADE as well as other corn producers to rely on its acts and practices in commercializing and selling VIPTERA and DURACADE as being done in a manner that would avoid negatively impacting corn export markets.

304. Syngenta's unfair practices occurred during the course of conduct involving trade or commerce, specifically the commercialization and sale of VIPTERA and DURACADE.

305. Illinois corn producers incurred damages due to the loss of the Chinese import market and resulting drop in the price of corn due to Syngenta's unfair acts and practices.

306. The loss of the Chinese import market and resulting drop in corn prices was directly and proximately caused by Syngenta's unfair acts and practices.

307. Syngenta's conduct was addressed to the market generally and otherwise implicates consumer protection concerns and, therefore, a consumer nexus exists in that:

- a. Syngenta's acts and practices in commercializing and selling VIPTERA and DURACADE corn were directed to all corn farmers generally; and
- b. Syngenta's acts and practices otherwise implicate consumer protection concerns including, but not limited to, not unreasonably risking the availability and welfare of corn export markets or minimizing the potential for unwanted comingling of crops.

308. Illinois Plaintiffs are authorized to bring a private action under the Illinois Consumer Fraud and Deceptive Businesses Practices Act pursuant to 815 Ill. Comp. Stat. 505/10(a).

309. Syngenta's conduct was willful and intentional and done with evil motive or reckless indifference to the rights of others. Punitive damages are thus warranted.

310. Reasonable attorneys' fees and costs should be awarded pursuant to 815 Ill. Comp. Stat. 505/10a.

**COUNT VIII**  
**VIOLATION OF MINNESOTA DECEPTIVE TRADE PRACTICES ACT**  
**(As to all MINNESOTA Plaintiffs)**

311. Plaintiffs incorporate by reference all preceding Paragraphs as though fully set forth herein.

312. The Minnesota Uniform Deceptive Trade Practices Act, Minn. Stat. § 325D.43, *et. seq.*, provides in relevant part:

**Subdivision 1. Acts constituting** A person engages in a deceptive trade practice when, in the course of business, vocation, or occupation, the person:

- (1) passes off goods or services as those of another;
- (2) causes likelihood of confusion or of misunderstanding as to the source, sponsorship, approval, or certification of goods or services;
- (3) causes likelihood of confusion or of misunderstanding as to affiliation, connection, or association with, or certification by, another;

\*\*\*

(5) represents that goods or services have sponsorship, approval, characteristics, ingredients, uses, benefits, or quantities that they do not have or that a person has a sponsorship, approval, status, affiliation, or connection that the person does not have;

Minn. Stat. § 325D.44.

313. The Minnesota Plaintiffs are authorized to bring this claim under Minn. Stat. § 8.31, subd. 3a.

314. Syngenta has used in commerce false or misleading descriptions of fact and/or false or misleading representations of fact, which were likely and/or did cause confusion or mistake. These misleading descriptions and/or representations related to VIPTERA's approval

or imminent approval for import to China. These deceptions originated in pertinent part in Minnesota, at the principal place of business of Defendant Syngenta Seeds. These deceptions and/or misrepresentations did not involve the product's labeling and packaging.

315. Syngenta's false or misleading descriptions of fact and/or false or misleading representations of fact, caused, and/or were likely to cause customer confusion about the approval of the products from foreign regulatory authorities, including the Chinese government.

316. Plaintiffs have and continues to be damaged by Syngenta's conduct.

317. Plaintiffs' damages were proximately caused by Syngenta's conduct.

318. As a direct result and proximate result of the foregoing, Plaintiffs have been injured and suffered financial loss in excess of \$75,000 for which damages and other relief as may be available at law or equity is warranted.

319. Because Syngenta's actions have been committed willfully, maliciously, and intentionally, Plaintiffs are entitled to recover costs and reasonable attorneys' fees under Minn. Stat. § 325D.45.

**COUNT IX**  
**VIOLATION OF NORTH CAROLINA UNFAIR AND DECEPTIVE TRADE**  
**PRACTICES ACT**  
**(As to all North Carolina Plaintiffs)**

320. Plaintiffs incorporate by reference all preceding Paragraphs as though fully set forth herein.

321. N.C. Gen Stat. § 75-1.1 declares that unfair or deceptive acts or practices in or affecting commerce are declared unlawful.

322. A practice is unfair if it offends established public policy, immoral, unethical, oppressive, unscrupulous, or substantially injurious.

323. N.C. Gen. Stat. § 75-16 provides that if any person or the business of any person

is injured by reason of any act or thing done by another in violation of the North Carolina Unfair and Deceptive Trade Practices Act, the injured person or entity may bring a claim for damages.

324. Syngenta has committed willful unfair trade practices by a number of acts and omissions taken to inequitably assert its power and position including but not limited to:

- a. Prematurely commercializing VIPTERA AND DURACADE on a widespread basis without reasonable or adequate safeguards;
- b. Instituting a careless and ineffective "stewardship" program;
- c. Failing to enforce or effectively monitor its "stewardship" program;
- d. Selling VIPTERA and/or DURACADE to thousands of corn farmers with knowledge that they lacked the mechanisms, experience, ability and/or competence to effectively isolate or "channel" those products.

325. Syngenta's actions offend public policy, were immoral, unethical, oppressive, unscrupulous, or substantially injurious to all North Carolina Plaintiffs.

326. Syngenta's acts took place in or effected commerce in North Carolina.

327. Syngenta's actions and omissions proximately caused the injuries and damages sustained by the North Carolina Plaintiffs.

328. Syngenta willfully engaged in the unfair and deceptive acts and practices set forth herein.

329. The North Carolina Plaintiffs are thus entitled to an award of compensatory damages and prejudgment and post-judgment interest, as well as treble or other exemplary damages, attorneys' fees and costs pursuant to N.C. Gen. Stat §§ 75-16 and 75-16.1.

#### **PRAYER FOR RELIEF**

WHEREFORE, PREMISSES CONSIDERED, Plaintiffs pray they have of and recover from the Defendants, jointly and severally, compensatory and punitive damages, together

with appropriate equitable relief, as follows:

- A. Entry of judgment ordering Syngenta to take affirmative steps to remediate the contamination that it has already caused;
- B. Entry of judgment finding:
  - i. Syngenta's release of VIPTERA and DURACADE corn constituted a public nuisance;
  - ii. Syngenta's release of VIPTERA and DURACADE corn constituted a private nuisance;
  - iii. Syngenta's release of VIPTERA and DURACADE corn was negligent;
  - iv. Syngenta is liable for damages done by the release of VIPTERA and DURACADE corn;
  - v. Syngenta is strictly liable for damages done by the release of VIPTERA and DURACADE corn and the resulting injuries to the Plaintiffs in Illinois, Indiana, Iowa, Minnesota, Nebraska and South Dakota;
  - vi. Syngenta's release of VIPTERA and DURACADE corn constitutes tortious interference;
  - vii. Syngenta's activities surrounding its release of VIPTERA and DURACADE corn violated the Illinois Consumer Fraud and Deceptive Business Practices Act;
  - viii. Syngenta's activities surrounding its release of VIPTERA and DURACADE corn violated the Minnesota Deceptive Trade Practices Act; and
  - ix. Syngenta's activities surrounding its release of VIPTERA and DURACADE corn violated the North Carolina Unfair and Deceptive Trade Practices Act.

- C. Monetary damages including compensatory relief to which Plaintiffs are entitled and will be entitled at the time of trial;
- D. Prejudgment interest;
- E. The costs of this action;
- F. Attorneys' fees; and
- G. Such other and legal and proper relief.

Respectfully submitted,

/s/ W. Wylie Blair

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Case Number 2015L 001219

Transaction ID: 57889531

Date: Sep 18 2015 04:01PM

Mark Von Nida

Clerk of Circuit Court

Third Judicial Circuit, Madison County Illinois

# EXHIBIT A

**Syngenta AG ADR SYT**  
**Q1 2012 Earnings Call Transcript**

**Executives**

- Jennifer Gough : IR
- John Ramsay : CFO
- Michael Mack : CEO

**Analysts**

- Stacie Shoran : Liberum
- Andrew Benson : Citigroup
- Richard Logan : Goldman Sachs
- Lucy Watson : Jefferies
- Andrew Stott : Bank of America Merrill Lynch
- Amy Walker : Morgan Stanley
- Jean de Watteville : Nomura
- Thomas Gilbert : UBS
- Patrick Jousseau : Societe Generale

Transcript Call Date 04/18/2012

**Operator:** Good morning, ladies and gentlemen and welcome to the Syngenta Q1 2012 Trading Statement Conference Call. At this time, all participants are in a listen-only mode until we conduct a question-and-answer session and instructions will be given at that time. I would just like to remind you that this conference call is being recorded.

I would now like to hand over to the Chair person, Jennifer Gough. Please go ahead with your meeting and I'll be standing by.

**Jennifer Gough - IR:** Good morning, and welcome to the call. Today's call is hosted by Mike Mack, CEO and John Ramsay, CFO. Slides to accompany the presentation are available on our website [syngenta.com](http://syngenta.com).

Let me, first of all, remind you of our usual cautionary statement. This presentation contains forward-looking statements, which can be identified by terminology such as 'expect', 'would', 'will', and similar expressions. Such statements may be subject to risks and uncertainties that could cause actual results to differ materially from these statements. We refer you to Syngenta's publicly available filings with the U.S. SEC for information about these and other risks.

With that, I would like to hand you over to Mike, who will start the presentation on Slide 3.

**Michael Mack - CEO:** Thank you, Jennifer. Good morning, ladies and gentlemen. When we last spoke in February, we reported on a year of significant growth, which of course set the bar high for 2012. I am pleased to report that we've made a strong start now to the Northern Hemisphere season with double-digit growth in both North America as well as Europe.

Overall, sales were up by 9% at constant exchange rates with volume up 5% and

price up 4%. Prices were up by 7% in seeds and by 4% in crop protection. Now, the crop protection increase is compared with the first quarter of 2011, which was before we set our mid-year price increases. We're on track though to realize the expected price gain of 2% to 3% for the full year which is, of course, a consequence of the determined action we took last year and the substantial value which our products continue to offer to growers.

In seeds, growth reflects our global presence and the success of our technology, notably, in corn and sunflower. For this business, particularly, the early gains from our integrated strategy are apparent as increased marketing resources are leveraging our sales in areas such as Latin America and Eastern Europe.

Please turn now to Slide 4, which shows integrated crop protection and seed sales by region. Starting with North America, where sales were up 13%. Warm weather there has encouraged an early start to the season and corn planting intentions are at the record level of almost 96 million acres. Planting is just getting underway and customers have been gearing up for buoyant season including for crop protection.

Our business has benefited from increased awareness of both weed and insect resistance issues, which demand adapted solutions combining several technologies. Although fungicides are applied later in the season, the signs are that the rate of adoption is going to increase again.

In Europe, Africa, and Middle East sales were up by 14% and as last year we're seeing substantial growth in developed as well as emerging markets. Part of this stems from the impact of very low temperatures in February and early March, which resulted in winterkill and more than 7 million hectares which is more than 10% of the total, mainly in Northern and Eastern Europe. This has led to a rush to plant spring crops not just cereals, but also corn and sunflower and our broad portfolio has meant that we're well placed to respond to this development. The areas which made the largest contribution for growth were France and Eastern Europe. In France, as we mentioned in February, a change in the law on credit terms moved sales from more saison in the fourth quarter into the first quarter.

We also saw good underlying growth particularly for CALLISTO on corn in the fungicides. In Eastern Europe, we saw rapid expansion in sunflower and corn and the benefits of a broadened crop protection range.

In Latin America, where the season now draws to a close in the first quarter, sales were lower as draught in Argentina and Southern Brazil affected crop protection usage. Now, this was partly offset by a strong second corn season in Brazil, leading to dramatic growth in our corn seed sales augmented by our enhanced trait and germplasm portfolio.

Overall, we had an excellent season in Latin America with full year 2011 sales up by 19%. Finally, in Asia Pacific sales were up by 2% with performance impacted by cold wet weather in Australia not something we usually get to talk about.

This is however, expected to favor crop development there for the remainder of the year. Sales were also affected by the phasing out of older products in India and

Japan. However, we're seeing continued strong growth in China and in Asian countries.

Let me now hand you over to John, who will continue with some more detail on sales by product line. John.

**John Ramsay - CFO:** Well, thank you Mike. Please turn to Slide 5, let me first of all draw your attention to one change in the way we are presenting product line sales. Meeting accordance with the new reporting structure we announced in February.

The crop protection product lines no longer show professional products, which are now included in our global lawn and garden business segment, and the same applies to flowers which were formerly reported under seeds.

Turning now to the figures, total crop protection sales were up 9% with constant exchange rates, the main driver for growth came from selective herbicides reflecting strong demand for corn in the U.S. and Europe. In cereals AXIAL, now in its seventh year saw sales up by a third.

Non-selective sales were lower with a decline in GRAMOXONE mainly due to the delayed sales pending introduction of a new formulation in Korea and this was partly offset by growth in TOUCHDOWN across the Americas.

Fungicides saw strong early demand in Northern Europe as well as France. In addition, AMISTAR expanded rapidly in Asia and then in U.S. sales were up by almost 40%. Growth in insecticides reflected the further success of ACTARA particularly on sugarcane in Brazil, the rollout of DURIVO and significant expansion in sales of force for corn rootworm control.

Seed care had a very good start to the year following on from the growth of 18% in 2011. Sales were up strongly in all regions driven by the ongoing success of CRUISER.

Slide 6 shows the sales of new products, which were up 35% in the quarter, with a five-year compound average growth rate of the 39%. Then the market site AVICTA has now been successfully launched on corn and soybean in Latin America. I have already mentioned AXIAL where growth was driven by Europe and by a recovery in Canada after two years of lost cereal acreage.

The DURIVO family of products continues to expand rapidly on rice and vegetables in Asia and REVUS for vegetable, potatoes and blight made a significant contribution to fungicide growth in Europe.

The two newest introductions are SEGURIS for disease control in cereals and the seed treatment VIBRANCE, which will start to make a visible contribution from the second half of this year. Altogether these products which for the full year 2011 had combined sales of \$619 million of peak sales potential of around \$1.8 billion. Turning now to seed sales by product line on Slide 7.

Corn soybean sales were up 13% driven by strong corn demand in all regions and by the ongoing reinforcement of our competitive position through trait introductions and

germplasm enhancement underlying growth in corn was partly offset by lower licensing income, \$30 million less than in the first quarter of 2011 when we received an introductory milestone payment from pioneer. I will say more in a moment about the success of our corn technology.

Soybean sales were lower owing to the reduced acreage expectation in the U.S. and to the ongoing transition of a portfolio to Roundup Ready 2 technology. Diverse field crops continued a growth record for which I'll show you more detail in a moment. Vegetable sales were lower as consumers in Europe and North America rein back expenditure.

Let me now highlight for you some aspects of our global technology advance in corn and please turn to Slide 8. While the U.S. has been at the forefront of our technology development, it is now expanding rapidly in the rest of the world, with nearly 50% of Q1 corn seed sales outside the U.S.

In the U.S. around 85% of the portfolio is now triple or multi stack. We expect sales of VIPTERA this year to be between 25% and 30% of the total. While VIPTERA is our first truly distinctive insect trait Enogen further demonstrates our biotech innovation capacity. It contains the industry's first output trait for corn, one which can significantly improve the profitability of ethanol plants, which use the dry grind method. Launched at the end of last season, this year Enogen will be grown in a closed-looped system on more than 20,000 acres and discussions are ongoing with a number of dry grind ethanol plants.

To give you an idea of the market potential, just under 40% of U.S. corn is expected to be used for ethanol this year. Of this around 90% will be processed by dry grind plants, that is equivalent to nearly 35 million acres.

Latin America is now playing a key role in a corn seed expansion. Around 20% of the portfolio for the 2011 12th season was double or triple stack and this is expected to increase rapidly.

In March, we received approval for our quadruple stack corn in Argentina, which will provide industry-leading control of both above and below the ground insects. In Asia Pacific, our corn sales more than doubled in the first quarter and there is further significant growth potential with the plant launch of triple stacks in the Philippines and corn borer control with herbicide tolerance in Vietnam.

Finally, in Europe sales were up 56% in the quarter with particularly strong growth in Eastern Europe. Of course, GM technology currently plays no role here, but rather we have seen the benefit of our integrated approach as we build further on a strong crop protection presence.

Continuing on Slide 9, our integrated portfolio means that we are uniquely placed to help grow and manage the increasing challenges of wheat and insect resistance. There are now 11 resistant wheat species in the U.S. and 10 million corn acres are affected. This is also a growing problem in Brazil. Our leading corn herbicide portfolio including glyphosate mixtures enable growers to deal effectively with weeds, which if untreated can cause substantial crop loss.

For insect control, we supply combination of chemicals and seed treatment as a complement to our traits package which this year includes our first refuge reduction sales. The range includes our leading soil insecticides force which we have always recommended areas of severe rootworm pressure and which now provides an additional tool to combat resistance.

As you can see from the chart, this is generating strong growth in sales, particularly in the U.S. but also in Europe, notably Hungary where corn rootworm pressure is increasing. Slide 10 shows you the accelerating growth in our Diverse Field Crops, the main driver has been a world-leading sunflower portfolio, which is enabling growers to meet increasing demand for high-quality healthy oils and to show you particularly the rapid growth in Eastern Europe.

Sugar beet showed growth across all regions in the first quarter, with the largest contribution coming from the success of glyphosate tolerant varieties in the U.S.

With that let me hand you back to Mike for some final comments.

**Michael Mack - CEO:** Thank you John. Turning now to the outlook for the remainder of the year on Slide 11. While weather will as ever play a role, the Northern Hemisphere season is developing well which leads us to expect continued positive sales momentum. Acceleration of integrated benefits should contribute to the achievement of our goal of market outperformance. Price increases and cost savings are on track and together should more than offset currency and raw material headwinds. Our estimate for these remains unchanged at \$300 million and \$350 million. We expect top line growth, ongoing portfolio enhancement and operational efficiency to enable an increase in profitability at constant exchange rates. Strong cash generation will continue and we plan to return around \$1 billion to shareholders through the dividend to be paid later this month as well as a \$200 million share buyback.

As an indication of the strength of our balance sheet in March we made a \$750 million debut bond issue in the U.S. and achieved the lowest coupons ever by a non-U.S. company within our rating category.

A crop based approach is inherent to our integrated strategy and we're keen to update you on the progress we're making. Slide 12 is a reminder of our program of crop based communications which follows on from last year's capital market stays.

The first event is a webcast on May 11, covering our cereals and corn business to be followed then by field trip in September for rice in vegetables. I hope as many of you as possible will join us for these events, but in the meantime, let me open up the call now for questions on the quarter. Nicole?

Transcript Call Date 04/18/2012

**Operator:** Andrew Benson, Citigroup.

**Andrew Benson - Citigroup:** Could you give us idea of your view of your market share in the seeds in North America and how the VIPTERA price is developing now, how you see that developing in the medium term as well? Can you talk a little bit

about the seed treatment, what's happening there? Is there something special going on? 24% seems quite high. The non-selectives, you talked about a one-off change in technology whether that was going to make much of a difference as well, if you could just give us an idea there please? Then can you give us a sense of the margin expansion that you hope to achieve this year?

**John Ramsay - CFO:** Right, good morning Andrew. Can you clarify your non-selective question?

**Andrew Benson - Citigroup:** You said non-selectives were lower because there was a – that you're going to introduce a new GRAMOXONE or something like that?

**John Ramsay - CFO:** Okay, yeah, I understand. Look, first on the market share question for corn, look, we've always been, I think, properly circumspect about that at the end of the first quarter. The season itself is the best time and when we talk again at the H1 to get a sense for that. I mean today, for example, corn acre is expected to be just below 96 million, but there is a lot to be planted, and I couldn't even guess the outcome if I don't know what divides the number of acres, we're dividing it into. As our corn seed sales around the world are up 21%, I think that's very representative of the success we're now beginning to enjoy from these investments that we made over the year. So, I wouldn't guess on the specific market share for corn beyond to say that the evolution of the portfolio has gone according to plan. We're pleased with where things are. Your second question has to do with VIPTERA, of course, it's getting a lot of very favorable reviews by farmers. The quality of this trade, the efficacy of the trade is terrific, and we're seeing some of that, of course, reflected in the performance of it down in Brazil and in Argentina where it is increasingly going to be a must have trait. As John mentioned, it's only – it's just now still only 25% to 30% of the offer but we expect that to grow. Again, the receptivity of is quite good. seed treatment this past year, as you know, sales up on the full year basis and this business is now worth more than \$1 billion for the first time. John any more color on the specifics of the seed treatment mix?

**Michael Mack - CEO:** It is an impressive performance because it comes on top of 18% growth worldwide last year. I mean it is driven by Cruiser, but not exclusively so. But it represents the trend to move to higher value seeds. So we are expanding something like 40% in Europe. It's up about 70% in Latin America which indicates the requirement to protect high-value seeds as you see the valued seeds expanding there. But it also up 20% in Asia. So it is this technology advance which is driving a very high-valued product which gives enormous build advantage to growers. Under GRAMOXONE, Andrew, it's a pretty straightforward answer. We are cutting over to a completely different formulation there and the new formulation has not yet been approved by the Korean authorities. So we are ready to go just as soon as they are and I regard this as – well, it did affect our sales but there is nothing particularly tricky about what's going on behind the scenes on that. Finally John, some color on the margin expansion beyond to say that we are not giving full year guidance on that but ...

**John Ramsay - CFO:** The EBITDA margin expect. We do expect to enhance the

EBITDA margin in constant currencies. It will very much depend on the top line growth and of course the currency in a margin level is going to be a headwind but on top of the constant currency growth in margin we made in 2011 we expect to make significant growth in 2012 or on a constant currency basis.

**Operator:** Jean de Watteville, Nomura.

**Jean de Watteville - Nomura:** Three question on Asia, if I can. First one is on you mentioned the impact of product rationalization for your Asian sales. Can you just quantify in terms of full year sales what would be the impact of the product that you discontinue? Second question, you mentioned strong sales of AMISTAR in Asia, now we all know that your sales of AMISTAR in Asia were historically very limited and so a big part of the (Growstar If ) AMISTAR going forward is in Asia. Can you just develop on what phase you are of the development of AMISTAR in Asia. If you can just highlight what's the patent protection and probably share with us a couple of sales targets of what you think you can achieve in Asia with AMISTAR? Lastly on GRAMOXONE, now I understand most of your sales of GRAMOXONE are in Asia and particularly in China. My understanding is that there are some discussions of a ban of some formulations of GRAMOXONE. Can you tell us what are your sales of GRAMOXONE in Asia and what could be the potential impact if any then happens in China of GRAMOXONE?

**John Ramsay - CFO:** Three questions, look I think on the first one, the product rationalization this is and has been an ongoing journey for the Company over the past 12 years, we've done it before, we'll continue to do it, we're undertaking now our small products very limited impact and of course as our new products continue to evolve as a percentage of the total portfolio some of the other ones naturally just get smaller and it makes good sense to begin to emerge away from those. So there is nothing -- it's not a new development and there is nothing of particular significance to it. The second one on AMISTAR in Asia Pacific you're right to point out that it continues to grow nicely. It has terrific efficacy on important Asian crops, the AMISTAR works on rice, AMISTAR works on vegetables and as you know, well from the U.S. experience it works on corn and it works on the cereals. So, all of the things that the Asians are undertaking to make their crops more productive AMISTAR has a market therefore, U.S. specifically about the sales targets, I mean, and I'm not trying to get around the question, but over the years we have been always more wrong than right about the potential success of AMISTAR, it has gone from strength-to-strength and the capacity expansions that we put in place have just a testimony to the power of this active ingredient to just continue to be a blockbuster that surprises. So, I mean if I were to give you a sales target today, my answer is, we would go past it, it's big part of the range and it is going to continue to be part of the story there. Finally, on remarks, I mean you're right to say that the Chinese today are undertaking an assessment of the various forms of GRAMOXONE a form being a straight product, a dilutive product and they're talking about a gel formulation two things about that. First, we are working very closely with them on a technical level and then the regulatory area and so we regard that as very much a local supplier in that respect. So nothing will come as a surprise to us, one. The second thing is to the extent that anything has changed it is expected that the phasing period would be a period of years for us of course and our

competitors in China to be able to adopt to the new form. So as we hit here today, I see no significant potential for any change in the regulatory status of this to be a financial surprise to the firm and we will have plenty of visibility on it if and as it gets decided.

**Jean de Watteville - Nomura:** Just the patent protection if I missed that in Asia?

**Michael Mack - CEO:** I am sorry.

**Jean de Watteville - Nomura:** Just I was wondering about the timing of the patent protection if I missed that in Asia on the main countries.

**Michael Mack - CEO:** We have got some years to run here and it's different years by different products. Any specific country you were interested in?

**Jean de Watteville - Nomura:** Malaysia I think is one of the important growth potential, Indonesia or Southeast Asia in general are we talking about mid-10 or I know the decade, we know it's off-patent in Brazil already. It is getting off-patent in North America. So I am just pretty curious what's the kind of timeframe of the patent protection you have in the main countries in Asia.

**Michael Mack - CEO:** Sure. Look, first, of course Jennifer can get back to you with the schedule, John, on virtually all of the countries, but I think the important point here is the way we have been thinking about this product as it goes off patent has been well established and I think our track record speaks for itself which is that we've taken a lot of these big markets to mixtures, have supplied some of the generic demand for this already, and the growth of the underlying growth of demand for this product is the same that continues to be the most significant feature of the story and if and as these things come off patent that is not something that's keeping us awake in night.

**Operator:** Patrick Jousseau, Societe Generale.

**Patrick Jousseau - Societe Generale:** Congrats on this good start. Two questions on actually corn, North American corn. Can you quantify little bit the royalty income that you got in Q1 and in 2012 what you expect on your corn portfolio? Second question, I did realize the corn season has started pretty early and do you expect a big impact on your corn protection portfolio is and maybe you can comment on that the maturity where that's been chosen is likely to be longer than last year, the corn maturity?

**Michael Mack - CEO:** Yeah, let me address the first question, the second question first, it is true that sometimes in early season can give us difficulty in the crop protection business if it becomes more immediately after it's wet and from a technical point of view farmers can't physically get into their field to spray a pre-emergent selective herbicides that can be a problem. That wasn't the case this year, it got rather warm sooner, it was dry enough and the crop protection business is off to a great start and so there is nothing about the earliness of the season that is in and up itself going to have an impact of what is happening here of course is as farmers have an early season they are looking forward to a good season and because they are going to probably have rather full amount of time to grow their

crop, that means that they're going to put as much investment in it as they possibly can, which is why today we're giving you a sense of the confidence that the Northern Hemisphere season getting off to a great start. John, on the first question?

**John Ramsay - CFO:** On the royalty Patrick, the difference in royalty in the first quarter is about \$30 million and that does relate to corn as specifically our rich one corn license income, but look that the thing about the royalty income is always going to be a bit lumpy particular between quarters as the income is dependent on certain hurdles and different ways of contracts are constructed and anticipate for the full year taking our whole royalty income in total and we should end the year with a level of royalty income roughly in line with last year, and therefore that's the \$30 million difference will be made up as we get into the seeds and we get royalty income from other streams.

**Patrick Jousseau - Societe Generale:** Just to come back on the corn. Did you see in your corn seeds portfolio longer maturity corns? Or has it shifted this year?

**John Ramsay - CFO:** I think by virtue of it being a bit early that would directionally say that there will be more longer maturities planted to the extent that they're available, but the season is getting underway right now, and there is a number of weeks to run and I wouldn't want to make a comment about what the rest of the competition has to offer in the way of short, I mean mid versus longer maturities, but our farmers are eager to get in their field and it's underway as we speak, but so far it's looking quite positive.

**Operator:** (Stacie Shoran, Liberum).

**Stacie Shoran - Liberum:** Just one question really. Your Latin American corn and soy seed business, very strong growth. You are talking about market share gain. I just wondered whether you could give us a bit of an update on your market share in these regions, what's driving the share gains? It's quite a small business today, but what are your expectations for that business over the next few years?

**John Ramsay - CFO:** The Latin American business is a bit of a version of my answer around AMISTAR which is it's a region that continues to - that we set high goals for ourselves and fortunately we've been able to even exceed those over these past years. Like some of the strength of the portfolio and crop protection and the strength of our go-to-market strategy there is now enabling us to take full advantage of some of the technology that's been adopted in the corn seed business as well as soybean seeds. Of course, the seed treatment offer that we have there all of these things come together really nicely in some of this big acre crops. We mentioned I think at the Capital Markets Day, I know we mentioned at the Capital Markets Day the tremendous potential we have in the sugarcane to ethanol business, for example, where (Plenus) is truly an innovative offer. All of the crop protection chemicals that we have in sugarcane continue to grow, but there is also coffee, there is plantation, Brazil continues to just develop the quality of its agriculture business. You weren't just talking about Brazil, but you're also talking about the rest of Latin America, including Argentina, and it's been very encouraging to us. I think right now we estimate that our market share of 14% in corn and that's up substantially from single digits just a few years ago Argentina we think it's about

17%, which is also up substantially, and it's again driven on the back of technology as well as, frankly, the breadth of the service offer that we have to the customers.

**Stacie Shoran - Liberum:** Just a follow-on, I mean, just on the corn and soy seed in particular, and is there anything that is driving those market share gains that you've reported today?

**Michael Mack - CEO:** I think what John said was that the Q1 sales in LatAm reflected a really strong second season for corn. Second season for corn is the (sofrina) season in Brazil and main season in Argentina. We believe that we've had share gain in both of those markets. John, the corn seed sales percentage change there is what year-on-year?

**John Ramsay - CFO:** Yeah Sophie, I mean just to say, in Latin America, just to make clear we're not selling soybean at this time of year. That comes in third and fourth quarter, but sales for corn in Latin America for the total region are up 76%. While it's early days, those estimates that Mike has given for market share look achievable on that basis. So, that's a really significant advance and thus our technology is going in there which is clear, but also I think we're probably getting some leverage on our new strategy of going to market on a combined basis, but the number is 76% growth.

**Operator:** Andrew Stott, Bank of America Merrill Lynch.

**Andrew Stott - Bank of America Merrill Lynch:** Just a question on the integration program, where you are now, which geographies you still got to do? I think if I remember, I think you're saying mid this year the whole thing should be done, so sort of a qualitative update there. Maybe question for John specifically, I wonder if you could isolate that GRAMOXONE Impacting Korea for Q1 if that's possible. Then final question is VIPTERA, I think you've gone from and correct me if I'm wrong, 20% of the portfolio in U.S. corn to - I think you said 25% to 30% is a range year-on-year. So, my question is the base right, is my 20% right? Then second question related to VIPTERA is what is the potential here? Is there a target that you can share with us for the mid-term?

**Michael Mack - CEO:** Andrew, look, the first thing on the integration, yes, it's going nicely. We've already integrated 16 of 19 territories, which means that we have three left. We believe those will be completed by mid-year. Just in the way of background on this, it's not that there is anything in the way, but here in Europe we're having to work closely with the workers councils and to be sure that we do it in conjunction with the agreements that we have in place with our employees. So, but the employees and the management, everybody is terrifically enthused by getting underway with this and so there is nothing of significance standing in the way of achieving that plan. On VIPTERA before I turn it back to John, on your second question, VIPTERA we think it has broad addressability on some 50% of the corn acres. And, of course, you know that some of the underlying insect pressure, whether it's corn or European corn borer - a corn rootworm or European corn borer or some of these lepidopteran pest, it can change from year-to-year. The amount of pressure can change from year-to-year, and the entire (dice borer) itself can move. So, 50% is a pretty good number, which is to say that we've got some room yet to

run on the evolution of VIPTERA within this, and again, it is getting great receptively in the market. John, on GRAMOXONE.

**John Ramsay - CFO:** Yeah. The GRAMOXONE phase is a phasing issue associated with bringing in the new formulation in Korea and the number will be around \$10 million.

**Andrew Stott - Bank of America Merrill Lynch:** Can I just follow-up Mike on your comment on the three territories not yet achieved. Is that a modest red flag about the 300 million target for this year or not?

**Michael Mack - CEO:** No, not at all. Until we have properly finished our discussions with the workers councils, they would regard it as inappropriate for us to say that we have completed it, but everything is going far better than we expected it would on this. Folks are looking forward to getting aligned behind this strategy. Many parts of it, of course, are already working to the new strategy but we just need to complete our work.

**Operator:** Richard Logan, Goldman Sachs.

**Richard Logan - Goldman Sachs:** Thanks for taking my questions. Most of them have been answered. But I just wanted to follow-up on the Enogen comment. It sounds like there is quite a large potential growth opportunity there. I wondered if you were able to give any sort of quantification of your expectations (heights) over the next few years in terms of the ramp up there. Then just on the pricing, if you could just confirm on the crop protection pricing, the increase that was achieved in the first quarter year-on-year? Then just on the integration, I mean you said about that you have been pleased with how that process had been going and that it was exceeding our expectations. I mean are you able to give us just some examples of like specific examples of things that have surprised you on the upside and any areas where things haven't gone quite as you expected just to get a bit more color on that, thanks.

**Michael Mack - CEO:** I'll take the first and the third maybe John you can offer a bit more detail on the crop protection pricing particularly the comps relative to the target we set at the mid year. First on Enogen, I mean what are we doing this year, because it didn't get approved regulatorily until February we were not able to put a lot of these corn into the ground and so what we are going to be able to have available to work with some of these customers on an ethanol plant basis, is a small handful of customers and that's physically what we're going to be able to do. Now, the major priority for us Richard during the year is going to be to sharpen the value proposition. We know that Enogen corn is able to give a range of benefits to these ethanol plants. Operators are able to expand the throughput of the plant. They are able to of course eliminate the use of their liquid emulates but they are also able to reduce some of the temperature, but we got to really sharpen up this value proposition. We believe it may offer \$0.08 to \$0.11 per gallon of benefit, and of course, as a percentage of their existing profit this is quite a good number, but we haven't had enough experience on a range of a number of different plants to be able to want to quantify it. As John said during his remarks, when you think about the corn crop for 40% of it going to ethanol and 90% of that amount being using this

very method of the addressable market is quite big, but I wouldn't want to get in front of ourselves. I'm telling you exactly where that's going to be. Now, that's been deregulated though, I can't promise that as the results of these trials come to pass, we're going to be in a much better position to be very sharp with you on precisely that question. On the integration, we're pleased with where it's going. Any time one imagines getting into reorganizing an entire company, 26,000 employees, you plan for the best but you can't know exactly how that's going to go. It was met with a high degree of enthusiasm. Of course, we spent a lot of time getting ready and planning for this all around the world, but for those of you who went to our Capital Markets Days in London and then in Stanton, Minnesota last year, you've got a sense for that, you ask can I give you a couple of examples of things that are going well. One of the things that we did after the Capital Market Days was we took that same experience, call it, demonstration days and we're doing that experience around the world and all of the territories, and we're inviting of course our employees, but also other stakeholders including customers to these events. Literally thousands of people have gone through the same experience that those of you who attended these events. Of course that's going to help now accelerate the overall understanding across the Company about what we're trying to do here, but it's also giving us an opportunity to have some exposure with customers. Again, the reflection that we're getting back from this is people can see the potential of this strategy to make a difference. You say, what's not going as well as expected, again, overall this thing has gone way better than we thought, I think, but because it's happening so quickly because people are wanting to get very quickly into what are the new ways of working, what you want me to do differently and we're just finding that we're having to pick up the pace in every respect to cut over to the new system. I can assure you that people in the information technology, the IS departments are very busy making sure that everybody gets integrated sales reports. The move to having an integrated offer and being sure that we can fully enable that has got us busy, but it is a good busy, as about all I can say to that. John, on CP pricing.

**John Ramsay - CFO:** On CP pricing, the figure is up 4% in the quarter as well as the Group number. I mean, clearly, that's a pleasing start opposite our target of 2% to 3% for the full year. The other pleasing aspect of it is that the 4% is made up of contributions from all the regions. So the price increase is widespread across the Group. But we still have a long way to go. We've still got the Latin American season, the mean season ahead of us, although that's looking reasonably positive, given the environment in which we're in, but nevertheless there's a long way to go at this stage, but I would still be at the target of 2% to 3% for the full year.

**Operator:** Patrick Jousseau, Societe Generale.

**Patrick Jousseau - Societe Generale:** Following a question on actually soybean seeds in North America. I understand the corn business did pretty well but the soybean must have gone down. Can you quantify a little bit? And I guess it is because of Roundup Ready 2 rollout, but can you be able to put some colors on that?

**Michael Mack - CEO:** Well, first of all, we can't know how it's going to end. As I

said earlier we are always a bit cautious about saying how things are going to finalize when the season is all over. So I don't know that with precision. Two things about this, first, acres are down Patrick and we believe they are going to be down from every single indication that's the first thing and yet having said that, I noticed just yesterday in some of the media clippings that come through that some farmers are headed over toward the soybean. So, I think we can't really be definitive until the season is over, but it looks to be that soybean as the acres are going to be down, one. Two, yes, we're converting over to Roundup Ready 2 technology and we got that right now in bulk of 30%, 35% of our portfolio and we're converting that as quickly as we can be the option of Roundup Ready 2 technology. Now, this has been my observation of the last two seasons has got off to a bit of a slow start again, not making a comment here opposite the competitors, but it seems to have picked up the pace, but we're licensee of Roundup Ready 2 and we're operating that into our portfolio. So I just regard that as really a phasing matter.

**Patrick Jousseau - Societe Generale:** And will it impact elsewhere in the world in this technology rollout?

**Michael Mack - CEO:** The Roundup Ready 2 technology again, I'm not in a position to characterize the big marketing intentions of that, remember (we're) licensees (Indiscernible) for that herbicide technology. It's to best of my understanding that that will be marketed in other places of the world that have soybean to the extent that it is adopted in Brazil for example Syngenta would be a licensee of that in Brazil and we do have a soybean seed business known there and you can see from our soybean overall numbers, we got a very strong offer between the seeds, the crop protection as well as the seed treatment, so. Okay, with the big markets of course, for soybean are North America and LatAm and we intent to be very active in both of those.

**Operator:** (Lucy Watson, Jefferies).

**Lucy Watson - Jefferies:** Two questions on VIPTERA, was VIPTERA at 25% to 30% at your corn portfolio, I'm wondering if this penetration is at all impacted by the availability of seeds supply or is it period demand driven metric and as a follow-up to that, can you provide any sort of an update on expected timing for key import approval for VIPTERA? Then one separate question, I believe your press release says corn seeds sales were up 16% in the U.S. in the quarter. I'm just wondering what the breakdown was between pricing volume and what your price outlook would be for seeds for the full year?

**Michael Mack - CEO:** Fine, I mean on VIPTERA I mean, we've known for a long time Lucy that this was going to have great receptivity, because we were able to see the efficacy of the product more in opposite these broad lap adapter in (pest) pressure and indeed it is really getting a lot of a very favorable reviews by grower. So, that 25% to 30% is a number that is pleasing to us we're selling as much as we have to offer in the portfolio and we'll get that up to that 50% just as quickly as we can. So, I think the demand is driven by the underlying quality of the product to help drive yields and they were getting ready to also get that incorporated into our portfolio to its fullest. On the import approval, it has import approval in all of the

major markets. There isn't outstanding approval for China, which we expect to have quite frankly within the matter of a couple of days. That remains on track for approval to the very best of our ability. Of course, the regulatory authorities are not something that we can handicap definitively, but we know of no issue with that whatsoever, and finally, John on the full year pricing for seeds and the mix effect of that, I mean, how could we best characterize them?

**John Ramsay - CFO:** The simple answer is the 16% refers to North American corn excluding the royalty effect in terms of growth and price within that is between 5% and 10% and the rest is volume.

**Lucy Watson - Jefferies:** Did you have an update on your outlook for pricing seeds for the full year?

**John Ramsay - CFO:** Pricing seeds for the full year, I mean we did see it not too dissimilar from where it is in the first quarter, but it's a long way to go, but I would say not dissimilar from Q1.

**Operator:** Amy Walker, Morgan Stanley.

**Amy Walker - Morgan Stanley:** I would like to ask, firstly please, you talk about acreage impacts on soybean seed sales, but Monsanto managed to put through a 12% growth in North American soy seed in its most recent quarter versus your sales being down this quarter, does that mean that you're actually losing share in U.S. soy seeds? The second question is, can you give us a bit of an indication on what you're seeing in your pricing developments sequentially quarter-on-quarter, particularly in crop protection? Given that you are comparative in pricing and costs are going to get tougher through the year, are you expecting to achieve further to control price increase since we're able to achieve the 2% to 3% guidance? Lastly, do you think there is a risk of a pull forward in demand from Q2 into Q1 based on the comments you made about more the non-wet conditions you seen in some regions in this quarter?

**Michael Mack - CEO:** Yeah, maybe John can help on the quarter-to-quarter comparison for pricing and the first question Amy again, I have to impress upon you, I'm not prepared to call the full season on either corn or soybean until the season is in and planted I can't know what that's going to be and I wouldn't want to comment on Monsanto's results or their outlook on their market share evolution. And it's as much as we are transitioning to Roundup Ready 2 technology and excluding for the acreage impact of soybean, if we end up having some slippage on market share for soybean on account of the transition to new technology that wouldn't be a complete shock to me. So, I'm not here today saying we have a high degree of confidence of market share evolution, but I'm here to say that there is nothing underlying about our soybean offer, our soybean germplasm that gives me any concern. Keep in mind that big thing is that corn is the profit driver here and I think the corn seed sales up 21% versus last year talk to the investments that we made and they are all of the money that we've been spending over these years has been to completely renovate and make unique in many respects of course, this corn offer and I have said now for a number of years, it's portable to other countries and it's portable across other crops and we continue to get all of the evidence that we

need to do that. So, corn is the big profit driver for us here and I don't know what our soybeans are going to land we have to say that it's -- the season is still in front of us. On the pull forward to look know I think the -- what we said on Q1 opposite more seasonal for France as it was more a delay from Q4 into Q1 as opposed to anything being pulled up from Q2 into Q1. So, no there is no to best of our knowledge there is no material impact on the sales momentum of Q1 as being part of -- as it part of Q2. John, again this pricing question...

**John Ramsay - CFO:** Yeah, that the price evolution, I think we're targeted 2% to 3% for the full year, and you're right to say as we went into the second half of 2011 than we did have and we started to put some price, price increases in place. So, the comparison for the full year will have to take account of that and the absolute magnitude really depends on Latin America are actually on what decisions we make going into the season and we've not yet decided and how that will play out, but at the present time we would see some opportunity for further price increases in Latin America and just given the evidence of the first quarter and the continuing buying conditions with the level of farmer income then that we're experiencing there. I mean taking that all together 2% to 3%, I think is a very solid target.

**Operator:** Thomas Gilbert, UBS.

**Thomas Gilbert - UBS:** Just to wrap up two questions (Plenus) in Latin America, can you give us an idea now that the season is trying to close either the absolute size of sales or the growth rate? The second question, again Latin America, could you update us what percentage of barter sales is in Brazil or in fact the entire continent? Can you confirm that the dry weather will not lead to any product being returned to you because your invoice is based on consumption? Maybe the same question to the distributors down there, are they as safe from any profit hits as you are from returned product that has not been sprayed at farm level?

**Michael Mack - CEO:** Thomas, the first on (Plenus) two things about that. We informed you all last year that this product is very unique. We're putting in place capacity, of course, and we are making the (Plenus) offer, and its acreage potential is vast, which you know and we've already taken in a way forward sales of several \$100 million, where people have expressed a commitment to take their sugarcane plantations to this technology just as soon as we geared up to fully supply it. So, that remains extremely encouraging. Of course, along the way, we're able to significantly expand the sales of our products into sugarcane, whether it would be insecticide or the herbicide. So, that's going quite nicely. John, I think the second question was broadly all around risk and get better management therein.

**John Ramsay - CFO:** Yeah, absolutely I can tell you what (Indiscernible) this is a season where we're very pleased to be on the consumption model, because the momentum coming out of the first part of the season going into the second was strong and then of course, there was the drought, now that probably does need that in Southern Brazil and in places in Latin America there will be some higher inventories at distributors, but not that it affects us and so far as our profit is concerned, because as you see on a consumption basis. As respect of the distributors, I think it will vary as a broad statement the distributors generally get

protected by the principal as a broad statement, although and that may result in some working capital expansion from our competitors et cetera, but distributors tend to be largely protected because of the principal. Coming back to the question of barter, about 40% of our sales are on barter and as you'll find in Brazil, about 60% of our sales are on secured terms, one way or another including barter on credit and barter for cash and indeed our cash sales there at last season increased significantly, just represented actually of the amount of money that's going around in that part of the world in terms of the levels of incomes that farmers are able to command.

**Thomas Gilbert - UBS:** Just the 40%, John, that was the number for the Continent, that's Brazil overall?

**John Ramsay - CFO:** That's Brazil. The barter in Argentina is at a similar level, but we're not planning to operate barter in the markets outside of Brazil and Argentina at this time.

**Michael Mack - CEO:** Ladies and gentlemen, that concludes the call today. Of course, if you have other questions or we weren't able to get you today, I apologize for that. Of course, you can contact Jennifer or (Lars) in Investor Relations, and again hope that some of you would be able to join the May telecast and otherwise look forward to talking with you at the half year in July. Thank you.

**Operator:** Ladies and gentlemen, thank you for your participation. This concludes today's conference. So, you may now disconnect your lines. Thank you.

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\*\*\*FILED\*\*\*

Case Number: 2015L001219

Transaction ID: 57889531

Date: Sep 18 2015 04:01PM

Mark Von Nida

Clerk of Circuit Court

Third Judicial Circuit, Madison County Illinois

# EXHIBIT B



REQUEST FORM FOR BIOSAFETY CERTIFICATE(S)  
ISSUED BY THE CHINESE MINISTRY OF AGRICULTURE

Name of company Texas Crystal Supply Company ("Recipient")  
Address 2803 N. 2nd St.  
Recipient 1 625 216  
Contact person Margolis Title Sales  
Business phone 214-377447 Business fax 714-490-4490  
Email address clt@texascrystalsupply.com

Biosafety Certificates for the following transgenic event(s) were issued to Syngenta Seeds AG, which has since been legally merged into Syngenta Crop Protection AG, by the Ministry of Agriculture (MOA) of the People's Republic of China (PRC).

Corn Product

Bt11  Bt176  GA21  MIR604  MIR162  S272

Exporting Country

UNITED STATES  ARGENTINA

(Please check the  for exporting Country)

The requested Biosafety Certificate will be provided to Recipient to assist Recipient in obtaining required authorization for shipments containing the above marked Corn Product(s) into China. Recipient hereby acknowledges and agrees as follows:

- The Biosafety Certificate are based on proprietary packages of safety information provided by Syngenta Seeds AG to the Ministry of Agriculture of the PRC and the underlying data was developed and submitted by Syngenta Seeds AG at considerable expense.
- Recipient agrees to use the Biosafety Certificate(s) only for the purpose of obtaining the required authorization(s) to import shipments containing the corresponding above marked Corn Product(s) into China, and not to provide a copy, directly or otherwise, to any third party except majority owned or controlled affiliates of Recipient.
- Recipient will comply with all applicable laws and regulations regarding the transactions or activities for which the Biosafety Certificate(s) is used.
- The Biosafety Certificate(s) provided allows importation of the above marked Corn Product(s) as raw materials for processing for food and feed use only, not for any research purpose or cultivation purpose. Recipient agrees to take reasonable safety control measures to ensure that raw materials of the Corn Product(s) imported will not be released into the environment or used in a way that would cause potential risk to biological diversity, sustainable utilization or human health.
- The Biosafety Certificate(s) may not be used except in accordance with the terms stated herein and any violation of such terms may cause substantial injury to Syngenta Crop Protection AG. Therefore, in addition to any other remedies which would be available, Syngenta Crop Protection AG and/or its affiliates which provided the Biosafety Certificate(s) to the Recipient reserve the right to withdraw the use of the Biosafety Certificate(s) if the Recipient is not in compliance with the terms agreed to in this document.

Acknowledged and agreed by Recipient:

Margolis

Authorized signature (Legal person)

Syngenta L

Name (in print)

Sales

Title

8/13/14

Date

Please complete this Request Form and return to the attention of "Abby Vulcan, Stewardship".

abby.vulcan@syngenta.com

Or

612-656-6564 (Direct)

1-800-858-8664 (Fax)

Case Number 2015L 001219

Transaction ID: 57889531

Date: Sep 18 2015 04:01PM

Mark Von Nida

Clerk of Circuit Court

Third Judicial Circuit, Madison County Illinois

# EXHIBIT C



National Grain and Feed  
Association



North American Export  
Grain Association

1250 Eye Street, N.W., Suite 1000, Washington, D.C. 20004-3922  
NGFA: (202) 289-4473 NAECA: (202) 652-4030

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**Joint Statement  
by National Grain and Feed Association (NGFA)  
and North American Export Grain Association (NAEGA)  
on Media Reports of Lawsuit Involving Syngenta's  
Agrisure Viptera™ Biotech Corn (MIR 162)**

August 26, 2011

The National Grain and Feed Association (NGFA) and North American Export Grain Association (NAEGA) today issued the following statement in response to media reports of the lawsuit involving Syngenta's Agrisure Viptera™ biotechnology-enhanced corn (MIR 162), which has received regulatory approval or authorization in the United States and several foreign markets, but not in China.

"The NGFA and NAECA have been made aware that Syngenta America Inc. has initiated legal action against Bunge North America Inc. in the U.S. District Court for the Northern District of Iowa. Both Bunge North America Inc. and Syngenta are member companies of the NGFA, while Bunge North America is a member of NAECA. NGFA and NAECA member companies make independent business decisions with respect to commercialized biotech-enhanced events based upon each company's assessment of the risks and rewards associated with each new event.

"The NGFA and NAECA both strongly support agricultural biotechnology and other scientific and technological innovations that contribute to the production efficiency and availability of a safe, abundant and high-quality food and feed supply for U.S. and world consumers.

"The grain handling and export industry have communicated consistently, clearly and in good faith with biotechnology providers and seed companies about the importance of biotech-enhanced events in commodity crops receiving regulatory approvals or authorizations – prior to commercialization – in key export markets where foreign governments have functioning regulatory systems that approve biotech-enhanced traits. Those communications regarding key export markets, identified through market and trade assessments, have been conveyed through industry trade associations and in direct communications by individual companies.

"Within the U.S. grain and oilseed handling and marketing system, each company makes its own determination as to whether to accept various commodity crops – including those containing biotech-enhanced events – driven by customer preferences, regulatory regimes, contractual

commitments and the respective markets they serve. Given the nature of the U.S. grain marketing system, these business decisions extend to the first point of sale from the producer. The NGFA in the late 1990s developed sample contract clauses that companies could consider using based upon their specific market needs and situations with respect to biotech-enhanced traits. These sample contract clauses were updated most recently in May 2007. NAECA and NGFA member companies continue to make commercial decisions on appropriate responses to the commercial introduction of new biotech-enhanced events based upon the individual company's facilities, economic considerations and market opportunities.

"Providing all participants in the value chain, from producer to consumer, with the ability to choose is a key driver in enabling coexistence of diverse interests in agriculture in the United States.

"U.S. farmers, as well as the commercial grain handling and export industry, depend heavily upon biotechnology providers voluntarily exercising corporate responsibility in the timing of product launch as part of their product stewardship obligation. Technology providers must provide for two critical elements: First maintaining access to key export markets like China, or for that matter any market like China that has a functional, predictable biotech-approval process in place; and second, proactive transparency to all stakeholders when there is a potential for restricted marketability of their products based upon approval status in major markets. The negative consequences of overly aggressive commercialization of biotech-enhanced events by technology providers are numerous, and include exposing exporting companies to financial losses because of cargo rejection, reducing access to some export markets, and diminishing the United States' reputation as a reliable, often-preferred supplier of grains, oilseeds and grain products. Premature commercialization can reduce significantly U.S. agriculture's contribution to global food security and economic growth.

"Putting the Chinese and other markets at risk with such aggressive commercialization of biotech-enhanced events is not in the best interest of U.S. agriculture or the U.S. economy."

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The NGFA, established in 1896, comprises more than 1,050 member companies that operate more than 7,000 facilities and handle more than 70 percent of the U.S. grain and oilseed crop. The NGFA's membership encompasses all sectors of the industry, including country, terminal and export grain elevators; commercial feed and feed ingredient manufacturers; biofuels producers; cash grain and feed merchants; end-users of grain and grain products, including processors, flour millers, and livestock and poultry integrators; commodity futures brokers and commission merchants; and allied industries. The NGFA also has strategic alliances with NAECA and Pet Food Institute. In addition, affiliated with the NGFA are 26 state and regional grain and feed trade associations. Canadian and Mexican firms also are NGFA members.

NAECA, a not-for-profit trade association established in 1912, consists of private and publicly owned companies and farmer-owned cooperatives that are involved in and provide services to the bulk grain and oilseed exporting industry. NAECA's mission is to promote and sustain the development of commercial export of grain and oilseeds and their primary products. Through a reliance on member action and support, NAECA acts to accomplish its mission from its office in Washington D.C., and in markets throughout the world.

Case Number 2015L 001219

Transaction ID: 57889531

Date: Sep 18 2015 04:01PM

Mark Von Nida

Clerk of Circuit Court

Third Judicial Circuit, Madison County Illinois

# EXHIBIT D



**National Grain  
and Feed Association**

[www.ngfa.org](http://www.ngfa.org)

1250 Eye Street, N.W., Suite 1003  
Washington, DC 20005-3922

P: (202) 289-0873  
F: (202) 289-5388

May 1, 2014

## **Legal Obligations and Potential Market Impacts Associated with Biotech-Enhanced Seeds Producing Grain Not Approved for Import into U.S. Export Markets<sup>1</sup>**

### **Introduction**

Syngenta Seeds Inc. has launched a new biotech-enhanced corn seed called Agrisure Duracade™ 5307 for planting in the United States in 2014. As of May 1, 2014, this trait has not been approved for import as food or feed by significant U.S. export markets, including China, the 28 countries of the European Union (EU), Colombia, Switzerland, Brazil, Egypt, India, The Philippines, Indonesia, Thailand, Singapore, the Russian Federation, Kazakhstan, Belarus or Turkey. Like the United States, a number of these countries (including China) have a zero-tolerance policy regarding the presence of unapproved biotech-enhanced traits in imported shipments.

The costly trade disruptions and commodity price impacts that can result were spotlighted when China in mid-November 2013 began rejecting shipments of U.S. corn and distillers dried grains with solubles (DDGS) after detecting the presence of Syngenta Seeds' Agrisure Viptera™ MIR 162, which has not received import approval yet. Some U.S. soybean shipments to China also were effected when trace levels of MIR 162 were detected.

This recent experience demonstrates how access to international markets for U.S. farm products can be disrupted or prevented when biotechnology-enhanced crops are commercialized before regulatory approvals are granted by importing countries.

#### **1. How much did these export market disruptions with China cost U.S. farmers?**

An analysis completed in early April 2014 by the National Grain and Feed Association (NGFA) estimated that the total economic damage of Syngenta's commercialization of Viptera MIR 162 prior to Chinese import approval – and the trade disruptions that ensued after China detected MIR 162 and rejected shipments under its zero-tolerance policy – ranged from \$1 billion to \$2.9 billion. Using a mathematical model that forecasts the

<sup>1</sup> This document is provided for informational purposes only, and does not constitute advice or recommendations to any segment of the corn value chain. While the information is believed to be accurate as of the date of publication, the National Grain and Feed Association makes no guarantees or warranties, expressed or implied, regarding the application or use of the contents. Each member of the value chain needs to make its own marketplace decisions, and nothing in this document should be construed as constituting a recommendation that members of the value chain take joint action of any nature. Further, nothing contained in this publication is intended as legal advice. Competent legal counsel should be consulted on legal issues.

national average corn price based on U.S. corn ending stocks, NGFA estimates that the trade disruption:

- Depressed U.S. corn prices by 11 cents per bushel. That amounts to a \$1.144 billion loss for U.S. corn growers over the last nine months of the 2013/14 marketing year (December 2013 to August 2014), as the United States in effect was shut out of the Chinese corn market.
- Depressed U.S. DDGS prices by an estimated \$7 per metric ton, resulting in a \$202 million loss for this sector during the current marketing year.
- Depressed U.S. soybean prices by an estimated 15 cents per bushel, amounting to a \$375 million loss for soybean farmers during the current marketing year.

Importantly, these cost impacts do not reflect likely losses of U.S. corn export sales to China that otherwise could have occurred in 2013/14 were it not for the Viptera MIR 162-related disruption in shipments and sales.

2. *What costs could be borne by U.S. farmers and the grain industry from commercialization of Duracade 5307 since it has not been approved yet in several key U.S. export markets?*

NGFA conducted a second analysis that found the estimated cost of the disruption to U.S.-China trade alone resulting from commercialization of this new corn trait could range from \$1.2 billion to \$3.4 billion (with a mid-point estimate of \$2.3 billion) for the 2014/15 marketing year. This analysis is predicated upon the belief that enforcement of a zero-tolerance policy by China will prolong the lack of access for U.S. corn to that important market for the duration of the 2014/15 marketing year (which runs from Sept. 1, 2014 to Aug. 30, 2015). China's regulatory process typically takes at least two years to review and approve new biotech-enhanced traits following approval by the United States.

The NGFA analysis assumes the same price-depressing impacts will occur for U.S. corn, soybean and DDGS as determined in the Agrisure Viptera MIR 162 case study. For Duracade 5307, most of the economic loss would be borne by U.S. corn producers (\$1.538 billion), with most of the remainder falling on soybean farmers (\$533 million) and DDGS sellers (\$270 million). These cost impacts were derived after accounting for an estimated \$64.9 million in economic benefits associated with commercialization of Duracade 5307 in terms of increased corn production resulting from improved rootworm control, as well as profits for Syngenta, its seed licensees and seed resellers.

3. *How long did Syngenta wait to obtain Chinese import approval of Duracade 5307 before deciding to sell it for planting in the United States? Is Duracade being sold or planted in Canada this year?*

Syngenta waited less than a year to commercialize Duracade 5307 in the United States after receiving U.S. regulatory approval for cultivation and planting. This occurred prior to obtaining many import market approvals. China's biotech regulatory-approval process starts after the commodity is deregulated or approved in the exporting country (in this case, the

United States), and as noted previously normally takes at least two years to complete. In some cases like China, commercializing this quickly does not provide even the minimum amount of time under its regulations to consider import approval.

The United States is the only corn exporting country in which Duracade 5307 is being launched in 2014. In contrast, in a March 10, 2014 NK update from Syngenta Canada Inc., it announced it would not proceed with commercial sale of Duracade hybrids for planting in 2014 in Canada. It instructed that any seed containing Duracade that had been shipped to Canada "cannot be sold," and that "arrangements for immediate returns will be made." The Syngenta Canada notice specifically referenced the lack of import approvals for Duracade in China and Europe, stating: "*Accordingly, we want to ensure the acceptance of any trait technology grown in Canada meets end market destination requirements.*" [Emphasis added.]

4. *Hasn't Syngenta entered into an agreement with Gavilon Grain LLC to assist in marketing Duracade 5307? Won't this prevent Duracade 5307 from getting into export markets where it's not approved?*

Syngenta has stated that Gavilon Grain LLC will accept grain containing Agrisure Duracade 5307 at "market price while providing stewardship and distribution services" for producers who are not able to find another market outlet for their harvested crops.

But given the zero-tolerance policy for unapproved biotech-enhanced traits enforced by China and other foreign countries, there are no guarantees – despite best efforts – that some level of Duracade 5307 will not become present in U.S. corn export shipments. The expansive geographic area in which Duracade 5307 seed is being marketed, the number of acres and producers believed to be involved in planting such seed, and the potential for pollen drift, cross-pollination and commingling make achieving a zero tolerance virtually impossible. In fact, private tests conducted when Viptera MIR 162 was commercialized showed a significant risk for low-level detections of that trait in corn harvested from fields where it was not planted.

Further, neither Syngenta nor Gavilon have said they will be financially responsible for economic losses if Duracade is detected in U.S. shipments to export markets for which it is not approved. [See question #5.] The combination of these factors adds a significant element of market risk that exporters evaluate when making individual company decisions on whether to market U.S. corn, co-products and other commodities to such foreign markets.

5. *What has Syngenta stated about the obligations and liabilities of growers if they choose to plant Agrisure Duracade corn in 2014?*

Syngenta says it will require growers to sign a Stewardship Agreement. One of the "grower responsibilities" contained in that agreement states that "the grower agrees to channel grain produced from seed products (whether corn or soybeans) to appropriate markets as necessary to prevent movement to markets where the grain has not yet received regulatory approval for import."

The grower agreement also contains a section entitled "General Provisions," which includes language under which the grower consents to understanding that "grain harvested from corn hybrids containing the Agrisure Technologies and DAS Technologies, or soybean varieties containing the Genuity RR2Y Technology or LibertyLink Technology, may not be fully approved for all grain exports markets."

Further, in a March 11, 2014 letter to member companies of the NGFA and North American Export Grain Association (NAEGA), Syngenta wrote that, "the grower remains responsible for planting, harvesting, and stewardship of seed and grain, just as members of the grain handling industry purchasing grain and reselling it remain solely liable for any risks or liabilities arising from their commercial activity." *[Emphasis added.]*

In several meetings with NGFA and NAGA officials, Syngenta representatives have rejected direct requests to bear commercial responsibility (financial liability) if and when Duracade 5307 is detected in U.S. export shipments to countries where it is not approved for import.

**6. *How much U.S. corn was disrupted by the detection of Agrisure Viptera MIR 162 in U.S. shipments?***

NGFA's analysis found that aggregated data supplied by U.S. exporters showed that between mid-November 2013 and March 2014, a total of 3.327 million metric tons (131 million bushels) of U.S. corn were subjected to either rejected or diverted shipments, or to canceled or deferred sales. In addition, trace levels of MIR 162 were detected in several U.S. soybean shipments to China, which caused those shipments to be detained.

**7. *How big of an export market was China expected to be for U.S. corn before these trade disruptions occurred?***

The U.S. Department of Agriculture (USDA) forecasts that China will become the world's largest corn importer by 2020. China is projected to increase its corn imports to 22 million metric tons (866 million bushels) by 2023, up from 2.7 million metric tons (106 million bushels) in 2012. For 2013, USDA had projected that the United States would export 37 million metric tons (1,457 million bushels) of corn, and that China would import an estimated 7 million metric tons (276 million bushels) – virtually all of it from the United States. But U.S. corn shipments to China reported on an aggregated basis by U.S. exporters totaled only 1.23 million metric tons (48 million bushels) at the time the United States was effectively shut out of the Chinese market following the detections of MIR 162 in U.S. shipments.

Exports also are extremely important to U.S. soybean growers. USDA projects that 48 percent of the entire 2013 U.S. soybean crop will be exported, with nearly two-thirds of total U.S. soybean export sales for the 2013/14 marketing year destined for China.

*3. What kind of communications might be useful now between corn sellers and buyers?*

NGFA encourages corn buyers and sellers in the value chain to communicate concerning any limitations or restrictions buyers may have on accepting biotech-enhanced traits that do not have certain export market approvals. Each company will make its own independent business decisions in this regard based upon its market opportunities, market risks and other factors. For this reason, different companies or facilities may have different policies. For example, some companies or facilities may be unwilling to accept biotech-enhanced traits that are not approved in U.S. export markets because of the importance of international trade to their business or to U.S. facilities to which they sell. In other cases, facilities that may be willing to accept biotech-enhanced commodities that do not have export market approvals may want sellers to communicate in advance which loads have those traits so the facility can take steps to segregate and attempt to keep the product from entering export markets for which they are not approved. In still other cases, a company or facility may be located in an area dominated by domestic uses of corn (such as livestock feed markets) where traits unapproved for export markets can be utilized.

Farmers also are encouraged to read and fully understand Syngenta's grower agreement, and the legal obligations that apply to farmers planting and harvesting Duracade 5307.

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**About National Grain and Feed Association (NGFA):** The NGFA consists of more than 1,000 grain, feed, grain processing and grain-related companies that operate approximately 7,000 facilities that handle about 70 percent of all U.S. grains and oilseeds. NGFA's membership includes grain elevators; feed and feed ingredient manufacturers; biofuels companies; grain and oilseed processors and millers; exporters; livestock and poultry integrators; and associated firms that provide goods and services to the industry. Also affiliated with the NGFA are 26 state and regional grain and feed associations.

The NGFA strongly supports agricultural biotechnology and other scientific and technological innovations that contribute to efficient production and availability of a safe, abundant, affordable, high-quality and sustainable food and feed supply for U.S. and world consumers. In this regard, the NGFA is working in tandem with the North American Export Grain Association, agricultural producer and commodity organizations, biotechnology providers and the seed industry in striving to improve the timeliness and synchronization of U.S. and foreign governmental approvals of biotech-enhanced traits.

Case Number 2015L 001219

Transaction ID: 57889531

Date: Sep 18 2015 04:01PM

Mark Von Nida

Clerk of Circuit Court

Third Judicial Circuit, Madison County Illinois

# EXHIBIT E

20-F 1 dp43837\_20L.htm FORM 20-F

~~As filed with the Securities and Exchange Commission on February 11, 2014~~

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549  
FORM 20-F

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE  
SECURITIES EXCHANGE ACT OF 1934  
OR  
 ANNUAL REPORT PURSUANT TO SECTION 13 OR 16(d) OF THE SECURITIES  
EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2013  
OR  
 TRANSITION REPORT PURSUANT TO SECTION 13 OR 16(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934  
OR  
 SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 16(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934  
Commission file number: 1-15152

**SYNGENTA AG**

(Exact name of Registrant as specified in its charter)

**Switzerland**

(Jurisdiction of incorporation or organization)

**Schwarzwalallee 216, 4058 Basel, Switzerland**  
(Address of principal executive offices)

James Halliwell  
+41 61 323 7074

James.halliwell@syngenta.com  
Syngenta International AG  
P.O. Box

CH-4002 Basel, Switzerland

(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

**Title of each class**

American Depository Shares, each representing  
one-fifth of a common share of Syngenta AG,  
nominal value CHF 0.10

**Name of each exchange on which registered**

New York Stock Exchange

Securities registered or to be registered pursuant to Section 12(g) of the Act: None

Securities for which there is a reporting obligation pursuant to Section 16(d) of the Act: None

Indicate the number of outstanding shares of each of the Issuer's classes of capital or common stock as of the close of the period covered by the annual report.  
93,128,149 Common shares, nominal value CHF 0.10 each

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Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes  No

If this report is an annual or transition report, Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of accelerated filer and large accelerated filer in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP

International Financial Reporting Standards as issued by the  
International Accounting Standards Board

Other

If this is an annual report, Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes  No

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**Introduction**

**NATURE OF OPERATIONS**

Syngenta AG ("Syngenta" or the "Company") is a world leading agribusiness operating in the Crop Protection and Seeds business, which is involved in the discovery, development, manufacture and marketing of a range of products designed to improve crop yields and food quality, and in the Lawn and Garden business, which provides professional growers and consumers with flowers, turf and landscape products.

Syngenta is headquartered in Basel, Switzerland and was formed by Novartis AG ("Novartis") and AstraZeneca PLC ("AstraZeneca") in November 2000 through an agreement to spin off and merge the Novartis crop protection and seeds businesses with the Zeneca agrochemicals business to create a dedicated agribusiness company whose shares were then the subject of a global offering (the "Transactions"). The Transactions were completed on November 13, 2000.

**FORWARD-LOOKING STATEMENTS**

The statements contained in this annual report that are not historical facts, including, without limitation, statements regarding management's expectations, targets or intentions, including for sales, earnings and earnings per share, constitute forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, and are based on the current expectations and estimates of Syngenta's management. Investors are cautioned that such forward-looking statements involve risks and uncertainties, and that actual results may differ materially.

Syngenta identifies the forward-looking statements in this annual report by using the words "expect", "would", "will", "potential", "plans", "prospects", "anticipates", "estimated", "believes", "intends", "aiming", "on track", or similar expressions, or the negative of these expressions. Syngenta cannot guarantee that any of the events or trends anticipated by the forward-looking statements will actually occur. Important factors that could cause actual results to differ materially from the results anticipated in the forward-looking statements include, among other things:

- the risk that research and development will not yield new products that achieve commercial success;
- the risks associated with increasing competition in the industry;
- the risk that economic and/or financial market weakness may have a material adverse effect on Syngenta's results and financial position;
- the risk that customers will be unable to pay their debts to Syngenta due to economic conditions;
- the risk that Syngenta will not be able to obtain or maintain the necessary regulatory approvals for its business;
- the risks associated with potential changes in policies of governments and international organizations;
- the risks associated with exposure to liabilities resulting from environmental and health and safety laws;
- the risk that important patents and other intellectual property rights may be challenged or used by other parties;
- the risk that Syngenta may encounter problems when implementing significant organizational changes;
- the risk that the value of Syngenta's intangible assets may become impaired;
- the risk of substantial product liability or personal injury claims;
- the risk that consumer resistance to genetically modified crops and organisms may negatively impact sales;
- the risk that resistance to the use of products derived through biotechnology could decrease which could adversely affect sales of products used for crop protection;
- the risks associated with climatic variations;
- the risks associated with fluctuations in foreign currency exchange rates;

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- the risks associated with entering into single-source supply arrangements;
- the risks associated with conducting operations in certain territories that have been identified by the US government as state sponsors of terrorism;
- the risks associated with natural disasters;
- the risk that Syngenta's effective tax rate may increase;
- the risk of significant breaches of data security or disruptions of information technology systems;
- the risks that Syngenta now considers immaterial, but that in the future prove to become material; and
- other risks and uncertainties that are not known to Syngenta or are difficult to predict.

Some of these factors are discussed in more detail herein, including under Item 3 "Key Information", Item 4 "Information on the Company", and Item 5 "Operating and Financial Review and Prospects". Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described herein as anticipated, believed, estimated or expected. Syngenta does not intend or assume any obligation to update these forward-looking statements.

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**PART I**

**ITEM 1 — IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS**

Not applicable.

**ITEM 2 — OFFER STATISTICS AND EXPECTED TIMETABLE**

Not applicable.

**ITEM 3 — KEY INFORMATION**

**Financial Highlights**

Syngenta has prepared the consolidated financial statements in US dollars (\$) and in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (IFRS). Financial figures are presented in millions of dollars (\$m) except where otherwise stated. The basis of preparation of the consolidated financial statements and the key accounting policies are discussed in Note 1 and in Notes 2 and 30, respectively, to the consolidated financial statements in Item 18.

The selected financial highlights information in accordance with IFRS presented below has been extracted from the consolidated financial statements of Syngenta. Investors should read the entire consolidated financial statements and not rely on the summarized information. The information includes the results of operations and the net assets of Circle One Global Inc. from May 15, 2009, Goldsmith Seeds Europe B.V. from September 23, 2009, Pybas Vegetable Seed Co., Inc. from December 16, 2009, Syngene Seed & Technology, Inc. from December 23, 2009, Meribo Seed International ApS from September 30, 2010, Greenleaf Genetics LLC from November 8, 2010, Agrosan S.A. from March 9, 2011, Pasteuria Bioscience Inc. from November 8, 2012, Sunfield Seeds Inc. from November 29, 2012, Devgen N.V. from December 12, 2012 and MRI Seed Zambia Ltd and MRI Agro Zambia Ltd from October 31, 2013. For further information about these and other acquisitions, see Note 3 to the consolidated financial statements in Item 18.

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	Year ended December 31,				
(£m, except where otherwise stated)	2013	2012 <sup>1</sup>	2011 <sup>1</sup>	2010 <sup>1</sup>	2009 <sup>1</sup>
<b>Amounts in accordance with IFRS</b>					
<b>Income statement data:</b>					
Sales	14,688	14,202	13,268	11,641	10,982
Cost of goods sold	(7,986)	(7,223)	(6,790)	(5,804)	(5,573)
Gross profit	6,702	6,979	6,476	5,737	5,418
Operating expenses	(4,616)	(4,723)	(4,469)	(3,978)	(3,618)
Operating Income	2,086	2,256	2,009	1,759	1,800
Income before taxes	1,934	2,116	1,859	1,643	1,675
Net Income	1,648	1,850	1,570	1,378	1,397
Net Income attributable to Syngenta AG shareholders	1,644	1,847	1,569	1,373	1,394
Number of shares – basic	81,962,222	81,644,180	81,892,275	82,887,803	83,154,537
Number of shares – diluted	82,468,306	82,132,922	82,383,611	83,225,303	83,780,196
Basic earnings per share (£)	17.88	20.16	17.07	14.81	14.96
Diluted earnings per share (£)	17.78	20.05	16.96	14.73	14.86
<b>Cash dividends declared:</b>					
Swiss franc ('CHF) per share	9.50	8.00	7.00	6.00	6.00
\$ per share equivalent	10.01	8.82	7.64	5.81	5.27
<b>Cash flow data:</b>					
Cash flow from operating activities	1,214	1,358	1,871	1,707	1,419
Cash flow used for investing activities	(772)	(1,218)	(472)	(450)	(880)
Cash flow from (used for) financing activities	(1,114)	(232)	(1,684)	(844)	170
Capital expenditure on tangible fixed assets	(625)	(508)	(479)	(396)	(652)
<b>Balance sheet data:</b>					
Current assets less current liabilities	3,990	4,537	4,107	4,363	4,583
Total assets	20,216	19,438	17,241	17,285	16,162
Total non-current liabilities	(3,356)	(4,226)	(4,063)	(4,483)	(5,339)
Total Liabilities	(10,712)	(10,653)	(9,708)	(9,838)	(9,650)
Share capital	(6)	(6)	(6)	(6)	(6)
Total shareholders' equity	(0,491)	(0,774)	(7,526)	(7,439)	(6,496)
<b>Other supplementary income data:</b>					
Diluted earnings per share from continuing operations, excluding restructuring and impairment (£) <sup>2</sup>	19.30	22.03	19.03	16.18	16.00

All activities were in respect of continuing operations.

**Notes**

1 In the consolidated financial statements in Item 18, Syngenta has adopted IAS 18 "Employee Benefits" (revised June 2011). Syngenta has also early adopted "Defined Benefit Plans: Employee Contributions", Amendments to IAS 18, issued in November 2013. Comparative amounts for the years 2009, 2010, 2011 and 2012 have been restated to reflect the revised IAS 18. The main changes that the revised IAS 18 introduces and the effect of the adoption on each financial statement line for the years ended 2012 and 2011 are detailed in Note 2 to the consolidated financial statements in Item 18. The effect of the adoption on the years ended 2010 and 2009 are as follows:

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(\$m, except per share amounts)	2010			2009		
	As reported	Adoption of IAS 19	After adoption of IAS 19	As reported	Adoption of IAS 19	After adoption of IAS 19
Cost of goods sold	(5,800)	(4)	(5,804)	(5,572)	(1)	(5,573)
Gross profit	5,741	(4)	(5,737)	5,420	(1)	5,419
Operating expenses	(3,848)	(30)	(3,978)	(3,601)	(18)	(3,619)
Operating income	1,793	(34)	1,759	1,819	(19)	1,800
Income before taxes	1,677	(34)	1,643	1,694	(18)	1,675
Net Income	1,402	(24)	1,378	1,411	(14)	1,397
Net income attributable to Syngenta AG shareholders	1,387	(24)	1,373	1,408	(14)	1,394
Basic earnings per share (\$)	15.07	(0.26)	14.81	15.11	(0.15)	14.96
Diluted earnings per share (\$)	14.98	(0.26)	14.73	15.01	(0.15)	14.86
Current assets less current liabilities	4,383	-	4,383	4,583	-	4,583
Total assets	17,285	-	17,285	16,129	33	16,162
Total non-current liabilities	(4,483)	-	(4,483)	(5,331)	(8)	(5,339)
Total liabilities	(9,836)	-	(9,836)	(9,642)	(8)	(9,650)
Total shareholders' equity	(7,439)	-	(7,439)	(6,473)	(25)	(6,488)
Diluted earnings per share from continuing operations, excluding restructuring and impairment (\$) <sup>2</sup>	16.44	(0.26)	16.18	16.15	(0.15)	16.00

2. Diluted earnings per share from continuing operations, excluding restructuring and impairment is a non-GAAP measure.

A non-GAAP measure is a numerical measure of financial performance, financial position or cash flow that either:

- includes, or is subject to adjustments that have the effect of including, amounts that are excluded in the most directly comparable measure calculated and presented under IFRS as issued by the IASB, or
- excludes, or is subject to adjustments that have the effect of excluding, amounts that are included in the most directly comparable measure calculated and presented under IFRS as issued by the IASB.

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Restructuring represents the effect on reported performance of initiating and enabling business changes that are considered major and that, in the opinion of management, will have a material effect on the nature and focus of Syngenta's operations, and therefore require separate disclosure to provide a more thorough understanding of business performance. Restructuring includes the incremental costs of closing, restructuring or relocating existing operations, and gains or losses from related asset disposals. Restructuring also includes the effects of completing and integrating significant business combinations and divestments, including related transaction costs, gains and losses. Recurring costs of normal business operations and routine asset disposal gains and losses are excluded. Impairment includes impairment losses associated with major restructuring as well as impairment losses and reversals of impairment losses resulting from major changes in the markets in which a reported segment operates.

Further discussion on the reason for including disclosure of this and other non-GAAP measures is included in Appendix A at the end of the Operating and Financial Review and Prospects in Item 5.

Restructuring and impairment charges for 2013, 2012 and 2011 are analyzed in Note 6 to the consolidated financial statements in Item 18. Restructuring for 2010 and 2009 mainly related to the Operational Efficiency program announced in 2004 representing the costs of closure of certain manufacturing and research and development sites and refocusing of other continuing sites and also to the further phase of the Operational Efficiency program announced in 2007 to drive cost savings to offset increased expenditure in research and technology, marketing and product development in the growth areas of Seeds, professional products and emerging country markets.

A detailed reconciliation of net income and earnings per share before restructuring and impairment to net income and earnings per share according to IFRS is presented in Appendix A at the end of the Operating and Financial Review and Prospects in Item 5.

**Risk Factors**

Syngenta's business, financial condition, results of operations or cash flows could suffer material adverse effects due to any of the following risks. Risks that are considered to be material are described below.

**The resources Syngenta devotes to research and development may not result in commercially viable products**

Syngenta's success depends in part on its ability to develop new products. Research and development in the agribusiness industry is expensive and prolonged, and entails considerable uncertainty. The process of developing a novel crop protection product, plant variety or trait typically takes about six to ten years from discovery through testing and registration to initial product launch, but this period varies considerably from product to product and country to country. Because of the complexities and uncertainties associated with chemical and biotechnological research, compounds or biotechnological products currently under development may neither survive the development process nor ultimately receive the requisite regulatory approvals needed to market such products. Even when such approvals are obtained, there can be no assurance that a new product will be commercially successful. In addition, research undertaken by competitors may lead to the launch of competing or improved products which may affect sales of Syngenta's new products.

**Syngenta faces increasing competition in its industry**

Syngenta currently faces significant competition in the markets in which it operates. In most segments of the market, the number of products available to the grower is steadily increasing as new products are introduced, although this trend can be partly offset by the withdrawal of some products because they are not re-registered or are subject to voluntary range reduction programs to reduce the range of products offered. At the same time, an increasing number of products are coming off patent and are thus available to generic manufacturers for production. As a result, Syngenta anticipates that it will continue to face significant competitive challenges.

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**Economic and/or financial market weakness may have a material adverse effect on Syngenta's results and financial position**

Commodity crop prices have historically been volatile and downturns in prices can indirectly affect Syngenta's results by adversely affecting the income and financial position of Syngenta's customers and of the users of Syngenta's products. This may result in reduced sales, competitive price pressure in Syngenta's markets and in slower collection of accounts receivable. A low availability of credit may also limit the amount of business Syngenta's customers and suppliers can transact with Syngenta, including customers and suppliers in parts of the Eurozone, which continue to experience economic problems. These occurrences may negatively impact Syngenta's business, results of operations or cash flows. Because of the high proportion of costs which are fixed in nature, Syngenta may not be able to compensate fully for these effects in the short term through measures such as reducing expenses.

While Syngenta views its current credit facilities and ability to access capital markets as adequate for its needs, difficulties in the banking sector in the future or illiquidity in the credit or capital markets may restrict Syngenta's ability to raise additional funds or increase the cost of such funding.

Significant declines in asset prices or changes to long-term assumptions may cause funding levels in Syngenta's externally funded defined benefit pension plans to fall below stipulated regulatory levels. This may require Syngenta to pay additional contributions to restore funding to required levels. Please see Notes 2 and 22 to the consolidated financial statements in Item 18 for further information about Syngenta's defined benefit pension plans and the assumptions used to measure the related pension liabilities.

**Syngenta's customers may be unable to pay their debts to Syngenta due to economic conditions**

Normally Syngenta delivers its products against future payment. Syngenta's credit terms vary according to local market practice, with credit terms for customers typically ranging from 30 to 180 days, except for customers in some emerging markets, where credit terms may range from cash on delivery to, in certain cases, 360 days. Syngenta's customers, particularly in developing economies and in economies experiencing an economic downturn, such as parts of the Eurozone, may be exposed to business, political or financial conditions impacting their ability to pay their debts, which could adversely affect Syngenta's results. See Item 5 for information regarding the amount of receivables Syngenta has with customers in the five main distressed Eurozone countries (Greece, Italy, Ireland, Spain and Portugal) and in Argentina. While Syngenta uses barter and other security arrangements to reduce customer credit exposure in some emerging markets, it may still be exposed to risk of material losses from its credit exposure in these markets.

**Syngenta may not be able to obtain or maintain the necessary regulatory approvals for some of its products, which could restrict its ability to sell those products in some markets**

Syngenta's products must receive regulatory approval before they can be marketed, but Syngenta may not be able to obtain such approvals. In most markets, including the United States and the European Union, crop protection products must be registered after being tested for safety, efficacy and environmental impact. In most of Syngenta's principal markets, after a period of time, Syngenta must also re-register its crop protection products and show that they meet all current standards, which may have become more stringent since the prior registration. For seeds products, in the European Union, a new plant variety will be registered only after it has been shown that it is distinct, uniform, stable, and better than existing varieties. Delays in obtaining regulatory approvals to import crops grown from seed containing certain traits may influence the rate of adoption of new genetically modified products in globally traded crops.

Regulatory standards and trial procedures are continuously changing. Responding to these changes and meeting existing and new requirements may be costly and burdensome. In addition, changing regulatory standards may affect Syngenta's ability to maintain its products on the market. A current example is the European Commission's two year restriction on the use of neonicotinoid insecticides on certain crops due to the alleged impact of these products on bee populations. For further information regarding this restriction, see Item 4 -- Business Overview -- Key Marketed Products -- Crop Protection.

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**Changes in the agricultural and certain other policies of governments and international organizations may prove unfavorable**

In subsidized markets such as the United States, the European Union and certain markets in Asia including Japan, reduction of subsidies to growers may inhibit the growth of markets for products used in agriculture. In each of these areas there are various pressures to reduce subsidies. In addition, changes in governmental policies that impact agriculture, for example the US government policy on renewable fuels, may similarly inhibit the growth of markets for products used in agriculture. However, it is difficult to predict accurately whether, and if so when, such changes will occur. Syngenta expects that the policies of governments and international organizations will continue to affect the income available to growers to purchase products used in agriculture and, accordingly, the operating results of the agribusiness industry.

**Syngenta is subject to stringent environmental, health and safety laws, regulations and standards, which can result in compliance costs and remediation efforts that may adversely affect its operational and financial position**

Syngenta is subject to a broad range of increasingly stringent laws, regulations and standards in all of its operational jurisdictions. This results in significant compliance costs and can expose Syngenta to legal liability. These requirements are comprehensive and cover many activities including: air emissions, waste water discharges, the use and handling of hazardous materials, waste disposal practices, the clean-up of existing environmental contamination and the use of chemicals and genetically modified seeds by growers.

Environmental and health and safety laws, regulations and standards expose Syngenta to the risk of substantial costs and liabilities, including liabilities associated with assets that have been sold and activities that have been discontinued. In addition, many of Syngenta's manufacturing sites have a long history of industrial use. As is typical for businesses like Syngenta's, soil and groundwater contamination has occurred in the past at some sites, and may be identified at other sites in the future. Disposal of waste from its business at off-site locations also exposes Syngenta to potential remediation costs. Consistent with past practice, Syngenta is continuing to investigate and remediate, or monitor soil and groundwater contamination at a number of these sites. Despite its efforts to comply with environmental laws, Syngenta may face remediation liabilities and legal proceedings concerning environmental matters.

Based on information presently available, Syngenta has budgeted expenditures for environmental improvement projects and has established provisions for known environmental remediation liabilities that are probable and capable of estimation. However, it cannot predict environmental matters with certainty, and the budgeted amounts and established provisions may not be adequate for all purposes. In addition, the development or discovery of new facts, events, circumstances, changes in law or conditions, including future decisions to close plants which may trigger remediation liabilities, could result in increased costs and liabilities or prevent or restrict some of Syngenta's operations.

**Efforts by Syngenta to protect its intellectual property rights or defend against claims asserting that Syngenta has infringed the intellectual property rights of others may be unsuccessful**

Scientific and technological innovation is critical to the long-term success of Syngenta's businesses. However, third parties may challenge the measures that Syngenta takes to protect processes, compounds, organisms and methods of use through patents and other intellectual property rights and, as a result, Syngenta's products may not always have the full benefit of intellectual property rights. In addition, while Syngenta takes steps to prevent unauthorized access to and distribution of its intellectual property, it cannot assure that unauthorized parties do not obtain access to and use such property.

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Third parties may also claim that Syngenta's products violate their intellectual property rights. Defending such claims, even those without merit, could be time-consuming and expensive. In addition, any such claim could also result in Syngenta having to enter into license arrangements, develop non-infringing products or engage in litigation that could be costly.

Legislation and jurisprudence on patent protection in major markets such as the United States and the European Union is evolving and changes in laws could affect Syngenta's ability to obtain or maintain patent protection for its products.

**Problems encountered by Syngenta when implementing significant organizational changes could adversely affect the future performance of the Company**

Syngenta expects to continue to engage in restructuring activities to reduce operating costs, increase sales, or both. In addition, Syngenta may acquire or dispose of significant businesses, which would necessitate restructuring its operations. Syngenta may fail to adequately implement such restructuring activities in the manner contemplated, which could cause the restructuring activities to fail to achieve the desired results. Even if Syngenta does implement the restructuring activities in the manner contemplated, they may not produce the desired results. Accordingly, such restructuring activities may not reduce operating costs or increase sales. Failure to adequately implement significant restructuring activities could have a material adverse effect on Syngenta's business and consequently impact its financial position, results of operations and cash flows.

**The value of Syngenta's intangible assets, including goodwill arising from acquisitions, may become impaired**

Syngenta has a significant amount of intangible assets, including goodwill, on its consolidated balance sheet and, if it continues to acquire businesses in the future, may record significant additional intangible assets and goodwill. As described in Note 2 and 30 to the consolidated financial statements in Item 18, Syngenta regularly tests its intangible assets for impairment. Upon completing its testing for 2013, which included subjecting the assumptions used in the testing to a sensitivity analysis, Syngenta recorded impairments of intangible assets totaling \$23 million. Otherwise, Syngenta has concluded that no material intangible assets are impaired as of December 31, 2013. However, unforeseen events that occur in the future may result in actual future cash flows for Syngenta's businesses being different from those forecasted. As a consequence, Syngenta's intangible assets could become impaired and the resulting impairment losses could have a material adverse impact on Syngenta's financial position and results of operations.

**Syngenta may be required to pay substantial damages as a result of product liability or personal injury claims for which insurance coverage is not available**

Product liability and personal injury claims are a commercial risk for Syngenta, particularly as it is involved in the supply of chemical products which can be harmful to humans and the environment. Courts have levied substantial damages in the United States and elsewhere against a number of companies in the agribusiness industry in past years based upon claims for injuries allegedly caused by the use of their products. While a global insurance program is in place, a substantial product liability or personal injury claim that is not covered fully or at all by insurance could have a material adverse effect on Syngenta's operating results or financial condition.

**Consumer and government resistance to genetically modified organisms may negatively affect Syngenta's public image and reduce sales**

Syngenta is active in the field of genetically modified organisms in the seeds area and in biotechnology research and development in seeds and crop protection. However, the high public profile of biotechnology and lack of consumer acceptance of products to which Syngenta has devoted substantial resources could negatively affect its public image and results. The current resistance from consumer groups, particularly in Europe, to products based on genetically modified organisms, because of concerns over their effects on food safety and the environment, may spread to and influence the acceptance of products developed through biotechnology in other regions of the world, which could limit the commercial opportunities to exploit biotechnology. Actions by these groups may also disrupt research and development or production of genetically modified seeds. In addition, some government authorities have enacted, and others in the future might enact, regulations regarding genetically modified organisms which may delay and limit or even prohibit the development and sale of such products.

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**Resistance to the use of products derived through biotechnology could decrease which could adversely affect sales of products used for crop protection**

Resistance to allowing the use of genetically modified seeds in certain parts of the world, including the European Union, could decrease resulting in growers there replacing crop protection technology with biotechnology, which would adversely impact Syngenta's sales of products used for crop protection. This impact may not be offset, in whole or in part, by the opportunity for Syngenta to increase its sales of seeds having traits developed through biotechnology. Sales of products used for crop protection accounted for approximately 77 percent of Syngenta's total sales in 2013, whereas seeds accounted for approximately 23 percent of such sales.

**Syngenta's results may be affected by climatic variations**

The agribusiness industry is subject to seasonal and weather factors, which make its operations relatively unpredictable from period to period. The weather can affect the presence of disease and pests in the short term on a regional basis and, accordingly, can affect the demand for crop protection products and the mix of products used (positively or negatively). The weather also can affect the quality, volume and costs of seeds produced for sale. Seed yields can be higher or lower than planned and significantly higher yields could lead to Syngenta purchasing more seeds from contract growers than can be sold during the limited product life of the seeds, which could lead to inventory provisions and write-offs.

**Currency fluctuations may have a harmful impact on Syngenta's financial results or may increase its liabilities**

Syngenta reports its results in US dollars; however a substantial portion of sales and costs are denominated in currencies other than the US dollar. Fluctuations in the values of these currencies, especially in the US dollar against the Swiss franc, British pound, Euro and Brazilian real, can have a material impact on Syngenta's financial results. Also, an increasing amount of Syngenta's sales are in emerging markets, where currency exchange rates can be volatile and where hedging products are expensive or of limited availability. Fluctuations in these emerging market countries' exchange rates against the US dollar may adversely impact Syngenta's results through recognition of currency losses. In addition, several countries in the Eurozone have been experiencing financial difficulties. If a member state of the Eurozone were to decide to abandon the Euro as its lawful currency and introduce a new national currency, Syngenta could incur losses upon the lawful conversion to the new national currency of amounts receivable from customers in the member state that were originally denominated in Euros.

**Syngenta maintains a single supplier for some raw materials, which may affect its ability to obtain sufficient amounts of those materials**

While Syngenta generally maintains multiple sources of supply and obtains supplies of raw materials from a number of countries, there are a limited number of instances where Syngenta has entered into single-source supply contracts or where Syngenta routinely makes spot purchases from a single supplier in respect of active ingredients, intermediates or raw materials for certain important products. These instances occur where there is sufficient commercial benefit and security of supply can be assured, or where there is no viable alternative source of supply. Such single supplier arrangements accounted for approximately 16 percent of Syngenta's purchases in 2013 of active ingredients, intermediates and raw materials used in Crop Protection products, as determined by cost. Syngenta's ability to obtain sufficient amounts of those materials may be adversely affected by the unforeseen loss of a supplier or from a supplier's inability to meet its supply obligations. The percentage of single supplier arrangements could increase in the future if consolidation were to occur among multiple supply sources.

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Syngenta also has contracts with a number of suppliers for services, including information technology, telecommunications and finance transaction processing. The sudden failure by one of these service providers to meet its obligations could prove disruptive to normal operations for a protracted period and adversely impact Syngenta's financial results. To mitigate this risk, Syngenta limits major contracts only to large global suppliers providing such services as part of their core business and having a significant portfolio of clients receiving similar services. Syngenta continuously monitors these companies both on their performance with Syngenta and their overall health and market performance.

**Syngenta conducts business in most countries of the world, including in certain high-risk countries, some of which have been identified by the US government as state sponsors of terrorism**

Syngenta conducts business in most countries of the world, some of which are subject to a high level of political or economic instability that could impact Syngenta's ability to continue to operate there. Acts of terror or war may impede Syngenta's ability to operate in particular countries or regions, and may impede the flow of goods and services between countries. In addition, Syngenta has minor operations in Cuba, Iran and the Sudan, which have been identified by the US government as state sponsors of terrorism. Syngenta's operations in these countries are quantitatively immaterial, and it is Syngenta's belief that supporting agriculture in these countries is beneficial to their wider population, for whom food is often in short supply. However, certain investors may choose not to hold investments in companies that have operations of any size in these countries and several US states have enacted, and others may in the future enact, legislation requiring public entities with investments in companies with operations in these countries to disclose this fact or in some cases to divest these investments. Any such divestment is not currently expected to have a material impact on the value of Syngenta shares.

**Natural disasters could adversely affect Syngenta's business**

Natural disasters could affect Syngenta's or its suppliers' manufacturing and production facilities, which could affect Syngenta's costs or ability to meet supply requirements. Natural disasters could also affect Syngenta's customers, which could affect Syngenta's sales or its ability to collect receivables due from customers. Syngenta's corporate headquarters and other facilities are located near an earthquake fault line in Basel, Switzerland. Additionally, some of Syngenta's other significant facilities are located in areas where earthquakes, hurricanes or flooding are possible. The occurrence of a major earthquake, hurricane or flood at a Syngenta facility could result in loss of life, destruction of facilities and/or business interruption, which could have a material adverse effect on Syngenta's business.

**An increase in Syngenta's group tax rate could occur, which would adversely affect its financial results**

The effective tax rate on Syngenta's earnings depends largely on the mix of business activities and consequent taxable profit in countries in which Syngenta operates. Syngenta benefits from the fact that a portion of its earnings is taxed at more favorable rates in some jurisdictions outside Switzerland. Future changes in the mix of business activities, or in tax laws or their application with respect to matters such as transfer pricing, intra-group dividends, controlled companies or a restriction in tax relief allowed on the interest on intra-group debt, could increase Syngenta's effective tax rate and adversely affect its financial results. Syngenta has several open tax years in many jurisdictions, where tax calculations may be subject to adjustment. These matters are discussed in Notes 2 and 25 to the consolidated financial statements in Item 16.

**Significant breaches of data security or disruptions of information technology systems could adversely affect Syngenta's business**

Syngenta's business is increasingly dependent on critical, complex and interdependent information technology systems, including Internet-based systems, to support business processes as well as internal and external communications. The size and complexity of Syngenta's computer systems make them potentially vulnerable to data security breaches, whether by employees or others, which may result in unauthorized persons gaining access to sensitive data. Such data security breaches could lead to the loss of trade secrets or other intellectual property. In addition, Syngenta's systems are potentially vulnerable to breakdown, malicious intrusion and computer viruses, which could disrupt production, order processing and shipping, cash receipts and disbursement processes, accounting and reporting processes, or other key business processes. A loss of trade secrets or other intellectual property, or systems-related disruption could have a material adverse effect on Syngenta's business, financial position, results of operations or cash flows.

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**Syngenta's share price may be volatile and subject to sudden and significant drops**

The trading price of Syngenta shares and ADSs has been, and could in the future continue to be, subject to significant fluctuations in response to variations in Syngenta's financial performance, regulatory and business conditions in its industry, general economic trends and other factors, some of which are unrelated to the operating performance of Syngenta.

**If you hold Syngenta ADSs it may be more difficult for you to exercise your rights**

The rights of holders of Syngenta ADSs are governed by the deposit agreement between Syngenta and The Bank of New York Mellon. These rights are different from those of holders of Syngenta shares in several respects, including the receipt of information, the receipt of dividends or other distributions, the exercise of voting rights and attendance at shareholders' meetings. As a result, it may be more difficult for a holder of Syngenta ADSs to exercise those rights.

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**ITEM 4 — INFORMATION ON THE COMPANY**

**History and Development of the Company**

**The Company**

Syngenta AG, a Swiss "Aktiengesellschaft", was formed on November 12, 1999 under the laws of Switzerland. Syngenta's business operations were created in 2000 by Novartis and AstraZeneca through an agreement to spin off and merge the Novartis agribusiness and the Zeneca agrochemicals business to create a dedicated agribusiness company whose shares were then the subject of a global offering. Both the Novartis and AstraZeneca agribusinesses had existed since the 1930's through a variety of legacy companies.

Syngenta is domiciled in and governed by the laws of Switzerland. It has its registered office and principal business office at Schwarzwaldallee 215, 4056 Basel, Switzerland. The telephone number of Syngenta is +41-61-323-1111.

Syngenta became a publicly listed company in 2000. At December 31, 2013, the company was listed on the SIX Swiss Exchange under the symbol SYNN and the New York Stock Exchange under the symbol SYT.

**Investments and Divestments**

Information on acquisitions, divestments and other significant transactions completed by Syngenta during each of the years ended December 31, 2013, 2012 and 2011 is included in Item 5 and in Note 3 to the consolidated financial statements in Item 18.

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**Business Overview**

**Industry Overview**

Syngenta is a world leading agribusiness operating in the crop protection, seeds and lawn and garden markets. Crop protection chemicals include herbicides, insecticides, fungicides and seed treatments to control weeds, insects and diseases in crops, and are essential inputs enabling growers around the world to improve agricultural productivity and food quality. In seeds, Syngenta operates in the high value commercial sectors of field crops (including corn, oilseeds, cereals and sugar beet) and vegetables. The lawn and garden business provides professional growers and consumers with flowers, turf and landscape products.

**Syngenta's Business**

Syngenta's business is divided into five reporting segments: the four geographic regions, Europe, Africa and Middle East, North America, Latin America and Asia Pacific, comprising the Integrated Crop Protection and Seeds business; and the global Lawn and Garden business. These segments reflect the organizational and management structure that was implemented in connection with Syngenta's strategy, announced in 2011, to integrate its commercial operations across Crop Protection and Seeds using a new business model with a strategic crop focus. The commercial integration was completed in 2012 and Syngenta adopted in 2012 the new segment reporting of sales and profitability. These segments are described in greater detail below.

The following information, which appears in other parts of this Form 20-F, is incorporated herein by reference:

- Item 5 – Operating and Financial Review and Prospects – Results of Operations, the tabular information regarding:
  - sales and operating income for the Integrated Crop Protection and Seeds business and for each of the four geographic segments therein;
  - sales by product line for the Integrated Crop Protection and Seeds business; and
  - sales and operating income for the global Lawn and Garden business.

Sales and operating income for the segments, as presented in Item 5 of this report, are seasonal. Results for the Europe, Africa and Middle East, North America and global Lawn and Garden segments are weighted towards the first half of the calendar year, which largely reflects the northern hemisphere planting and growing cycle. Results for the Latin America segment are weighted towards the second half of the calendar year, which largely reflects the southern hemisphere planting and growing cycle. Results for the Asia Pacific segment are weighted slightly towards the first half of the calendar year.

References in this document to Syngenta's competitive position, identified by terms such as "world-leading", "leader", "leading", "largest", "broadest", or similar expressions are based where possible on global agrochemical and biotechnology industry information provided by a third party or on information published by major competitors and are supplemented by Syngenta internal estimates.

Table of Contents**Integrated Business**

Based on the combined strength of its Crop Protection and Seeds businesses, Syngenta regards itself as uniquely positioned to address the increasingly complex challenges facing farmers, through the development of fully integrated offers on a crop basis. The integrated business is structured into 19 territories grouped under the four geographic regions (Europe, Africa and Middle East, North America, Latin America and Asia Pacific). Under this integrated business, Syngenta is developing an expanded crop-based product pipeline and increasing its reach into new markets with new products, solutions and local go-to-market strategies.

Crop teams for each of eight strategic global crops work alongside territory and regional management to develop and maximize integrated product and service offers. The eight global crops comprise cereals (wheat, barley), corn, field crops (sunflower, oilseed rape, sugar beet), rice, soybean, specialty crops (e.g. fruits, trees, nuts, vines, potatoes, cotton, plantations), sugar cane and vegetables.

Estimated sales by crop for the years ended December 31, 2013 and 2012 are as follows:

Estimated sales (\$m)	2013	2012	Change	
			Actual %	CER %*
Cereals	1,772	1,699	11	12
Com	3,560	3,612	-1	-
Field crops	1,428	1,299	10	11
Rice	653	580	11	16
Soybean	2,577	2,341	10	11
Specialty crops	2,004	2,051	-2	-1
Sugar cane	290	259	12	15
Vegetables	1,701	1,670	2	4
Other**	12	24	n/a	n/a
<b>Total</b>	<b>13,887</b>	<b>13,445</b>	<b>4</b>	<b>6</b>

Precise sales by crop cannot be determined because many of Syngenta's Crop Protection products can be used on multiple crops. Estimated sales by crop for the year ended December 31, 2011 are not presented because reliable estimates were not available prior to the implementation in 2012 of the integrated business strategy.

\* Change percentage at constant exchange rates ("CER"). For the definition of constant exchange rates, see Appendix A in Item 5.

\*\* Sales of Materials Protection products.

**Description of Products****Integrated Business**

The development of integrated offers involves combining Syngenta's Crop Protection and Seeds products, and in some instances combining Syngenta's products with third party products and services, to provide growers with innovative ways to improve crop yields and quality. These offers include integrated crop management programs using existing and newly developed crop protection solutions, genetics, innovative genetically modified and native trait packages, and growing protocols.

**Crop Protection**

Syngenta is active in herbicides, especially for corn, cereals, soybean and rice; fungicides mainly for corn, cereals, fruits, grapes, rice, soybean and vegetables; insecticides for fruits, vegetables and field crops; and seed care, primarily in corn, soybean, cereals and cotton. Herbicides are products that prevent or reduce weeds that

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compete with the crop for nutrients, light and water. Herbicides can be subdivided into (i) selective herbicides, which are crop-specific and control weeds without harming the crop and (ii) non-selective herbicides, which reduce or halt the growth of all vegetation with which they come in contact. Fungicides are products that prevent and cure fungal plant diseases that affect crop yield and quality. Insecticides are products that control chewing pests such as caterpillars and sucking pests such as aphids, which reduce crop yields and quality. Seed care products are insecticides and fungicides used to protect growth during the early stages. Syngenta is also investing in bio pesticide solutions, which complement traditional Crop Protection chemistry.

Syngenta has a broad range of Crop Protection products, making it number one or two in all of its target sectors, underpinned by strong worldwide market coverage. Approximately 95 percent of Syngenta's annual sales of Crop Protection products come from products marketed in all four region segments.

**Seeds**

Syngenta produces and markets seeds and plants that have been developed using advanced genetics and related technologies. Syngenta sells seed products in all geographic territories.

Syngenta's seed portfolio is one of the broadest in the industry, offering over 200 product lines and over 8,000 varieties of Syngenta's own proprietary genetics. Syngenta divides its seeds products into field crops, such as corn, soybean, rice, cereals, oilseeds and sugar beet, and vegetables. Syngenta has a significant market share in vegetables, corn, soybean, cereals, sugar beet and sunflower. Seed products are derived from a germplasm pool and trait portfolio and developed further utilizing sophisticated plant-breeding methods. In addition to income from development and commercialization of transgenic products, income is generated from licensing arrangements.

**Key Marketed Products and Services**

**Integrated Business**

- **NUCOFFEE®** is Syngenta's innovative business model operating in Brazil that brings together growers, cooperatives and roasters. Built around Syngenta's crop protection, quality and barter programs, the NUCOFFEE® platform helps Brazilian coffee farmers increase their profitability, with higher yields and higher prices for their coffee crop.
- **PLENUS®** is a ready-to-plant soybean seed in Latin America combining high quality germplasm and novel professional seed treatment containing a long life inoculant, offering simplicity and crop safety to the grower.

**Crop Protection**

**Selective herbicides**

Syngenta has a broad range of Selective herbicides that control grasses and broad-leaved weeds and are applicable to most crops, with a special emphasis on corn and cereals.

- **Atrazine (AATREX®/GESAPRIM®)** acts mainly against broad-leaved weeds. Although Atrazine was introduced in 1957 and has been off patent for a number of years, it remains an important product for broad-leaved weed control in corn. Atrazine is marketed in North America, Latin America, Asia Pacific and in Africa and the Middle East.
- **Clodinafop (TOPICK®/HORIZON®/ CELIO®/ DISCOVER®)** is a grass herbicide which provides a broad spectrum of annual grass control in wheat. To further increase crop safety in cereals the active substance Clodinafop is mixed with the safer Cloquintocet, which selectively enhances the degradation of Clodinafop in wheat but not in the grass weeds. Clodinafop is marketed in all regions.

Case Number 2015L 001219

Transaction ID: 57889531

Date: Sep 18 2015 04:01PM

Mark Von Nida

Clerk of Circuit Court

Third Judicial Circuit, Madison County Illinois

# EXHIBIT F



National Grain and Feed  
Association



North American Export  
Grain Association

1250 Eye Street, N.W. Suite 1103, Washington, D.C. 20004-3922  
NGFA: (202) 289-0873 NAECA: (202) 687-4030

## Joint Statement

**Issued by National Grain and Feed Association (NGFA)  
and North American Export Grain Association (NAEGA)  
Regarding Letter to Syngenta Requesting Suspension  
of Commercialization Activities of Syngenta's Agrisure Viptera®  
and Duracade® Corn**

January 23, 2014

The National Grain and Feed Association (NGFA) and North American Export Grain Association (NAEGA) today issued the following statement in response to rejections of U.S. corn and distillers dried grains with solubles (DDGs) by Chinese authorities because of the presence of Syngenta's Agrisure Viptera® biotechnology-enhanced corn, and Syngenta's intent to commercialize its Agrisure Duracade® biotechnology-enhanced corn, which also has not been approved yet by China and other U.S. export markets.

"On Jan. 22, 2014, the National Grain and Feed Association (NGFA) and North American Export Grain Association (NAEGA) sent a letter to Syngenta asking the company to immediately halt commercialization in the United States of its Agrisure Viptera® corn and Agrisure Duracade® corn until such time as China and certain other U.S. export markets have granted required regulatory approvals/authorizations.

"The NGFA and NAECA both strongly support agricultural biotechnology and other scientific and technological innovations that contribute to production efficiency and availability of a safe, abundant and high-quality food and feed supply for U.S. and world consumers.

"However, NAECA and NGFA are gravely concerned about the serious economic harm to exporters, grain handlers and, ultimately, agricultural producers – as well as the United States' reputation to meet its customers' needs – that has resulted from Syngenta's current approach to stewardship of Viptera. Further, the same concerns now transcend to Syngenta's intended product launch plans for Duracade, which risk repeating and extending the damage. Immediate action is required by Syngenta to halt such damage.

"There are numerous negative consequences incurred when the Chinese and other U.S. export markets are put at risk through commercialization of biotechnology-enhanced seeds before approvals for import into foreign markets are obtained. Such consequences may include reducing the value and demand for the U.S. farmers' products, preventing foreign consumer access to much-needed supplies, shutting off or increasing the cost of U.S. producers' access to some export markets for their crops, exposing exporting companies to financial losses because of cargo rejections and contract cancellations, and ultimately diminishing the United States' reputation as a reliable, often-preferred supplier of grains, oilseeds and grain products in world markets. Commercialization prior to foreign regulatory approvals also has a negative impact on the overall U.S. corn and other grain value chains, and reduces significantly U.S. agriculture's contribution to global food security and economic growth.

"Within the U.S. grain and oilseed handling and marketing system, each purchaser or handler makes its own determination as to whether to accept various commodity crops -- including those produced from biotechnology-enhanced seeds. Such a decision likely is driven by customer preferences, infrastructure and operational limitations, regulatory regimes and contractual commitments, as well as meeting regulatory requirements in the respective markets they serve. Given the nature of the U.S. grain marketing system, these business decisions extend to the first point of sale or transfer from the producer.

"As a matter of policy, NGFA and NAECA have communicated consistently, clearly and in good faith with biotechnology providers and seed companies about the importance of biotechnology providers actually obtaining regulatory approvals/authorizations for import in foreign markets before such traits are commercialized in the United States. Individual grain handler, processor, service provider and exporter member companies of our Associations represent further system-wide support and advocacy for this policy.

"U.S. farmers, as well as the commercial grain handling and export industry, depend heavily upon the exercise of due corporate responsibility by biotechnology providers with respect to the timing of product launch and commercialization. We therefore seek assurances from Syngenta that it will follow suit by publicly announcing that it will suspend immediately its commercialization of Viptera and Duracade products in the United States until such time as China and other U.S. export markets have granted required regulatory approvals and authorizations.

"Given these on-going concerns, NGFA and NAECA urge U.S. farmers to evaluate these issues as they prepare for the 2014 planting season. Farmers should check with their local grain elevators and merchants to determine whether the grain buyer or handler has any limitations on accepting biotechnology traits that do not have certain export market approvals."

The NGPA consists of more than 1,050 grain, feed, processing and grain-related companies that operate approximately 7,000 facilities that store, handle, merchandise, mill, process and export about 70 percent of all U.S. grains and oilseeds. Its membership includes grain elevators; food and feed ingredient manufacturers; biofuels companies; grain and oilseed processors and millers; exporters; livestock and poultry integrators; and associated firms that provide goods and services to the nation's grain, feed and processing industry. Also affiliated with the NGPA are 26 state and regional grain and feed associations. NGPA works to foster an efficient free-market environment that produces an abundant, safe and high-quality supply of grain, feed and feed ingredients for domestic and world consumers.

NAEGA, established in 1912, is comprised of private and publicly owned companies and farmer-owned cooperatives involved in and providing services to the bulk grain and oilseed exporting industry. NAEGA member companies ship the vast majority bulk grains and oilseeds exported each year from the United States. Dedicated to engaging the entire value chain, NAEGA focuses on predictable, reliable and expanded international trade of grains, oilseeds and their primary products. NAEGA members, stakeholders and governments around the world are key beneficiaries of NAEGA work to provide leadership, experience and capacity providing for global reach and influence supportive of international trade and investment.

Case Number 2015L 001219

Transaction ID: 57889531

Date: Sep 18 2015 04:01PM

Mark Von Nida

Clerk of Circuit Court

Third Judicial Circuit, Madison County Illinois

# EXHIBIT G

April 16, 2014

**Lack of Chinese Approval for Import of U.S. Agricultural Products Containing  
Agrisure Viptera™ MIR 162: A Case Study on Economic Impacts  
In Marketing Year 2013/14**

**Author: Max Fisher, Director of Economics and Government Relations  
National Grain and Feed Association, Washington, D.C.**

**Foreword**

The National Grain and Feed Association (NGFA) and North American Export Grain Association (NAEGA) seek to facilitate trade and provide for regulatory compliance while improving the environment for all crop production methods, including crop biotechnology. To reap the greatest benefit across the value chain, U.S. farmers and agricultural companies need the ability to market agricultural products to both domestic and foreign customers.

Access to International markets for U.S. farm products can be disrupted or prevented by a lack of regulatory approvals for biotechnology-enhanced events that are approved for planting and production in the exporting country, but not yet by governmental authorities in the country of import. In the aftermath of recent disruptions in corn trade between the United States and China resulting from the presence of Syngenta North America Inc.'s Agrisure Viptera™ MIR162, which has not been approved yet for import by the Chinese government, the NGFA undertook an analysis to assess the economic impact to the U.S. grain value chain. This report conveys the results of that analysis, and is provided as a case study to inform stakeholders of the ramifications of commercialization of crop biotechnology prior to gaining approvals in major U.S. export markets.

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**Introduction**

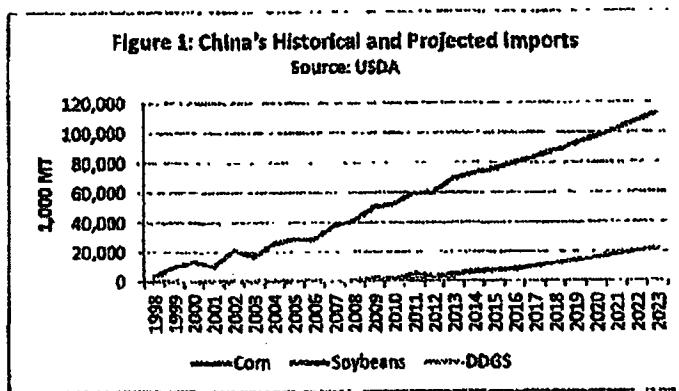
In November 2013, China began enforcing a zero tolerance policy for the presence of Syngenta's Agrisure Viptera™ MIR 162 (hereafter referred to as MIR 162) in corn imports. This development resulted in a series of trade disruptions – including testing; delays in vessel discharge; and deferrals, diversion and rejections of cargoes – when MIR 162 subsequently was detected in U.S. shipments of corn and distillers dried grains with solubles (DDGS). These disruptions effectively shut U.S. corn farmers out of China's feed grain import market, which previously almost exclusively had been supplied by the United States.

China subsequently has taken actions to utilize domestic, as well as international alternatives to U.S. corn. For instance, China's imports of U.S. grain sorghum have increased significantly. China also has sourced corn from Ukraine. And most recently, Brazil and Argentina each were granted approval to begin exporting corn to China.

This analysis estimates economic losses to U.S. sellers of corn and other affected commodities attributable to the loss of the Chinese corn market for the 2013/14 marketing year (September 1, 2013 to August 30, 2014).

## Highlights

- U.S. corn exports to China have been disrupted as a result of China's enforcement of zero import tolerance for MIR 162. The disruption, tied to positive detections of MIR 162 that began in November 2013, has virtually halted U.S. corn trade with China. In addition, U.S. trade with China DDGS and other U.S. crops is being conducted in a riskier market environment.
- China's corn import rejections before and after discharge, as reported to NGFA on an aggregated basis by U.S. exporters for purposes of this analysis, amount to a combined 1.45 million metric tons (mmt), substantially greater than the 908,800 metric tons (mt) reported most recently by the Chinese government.
- The U.S. Department of Agriculture's (USDA) 2013/14 marketing year corn import projection for China was reduced from 7 mmt to 5 mmt in January 2014. Based upon export sales commitment data from USDA, the United States was anticipated to be the principal corn exporter to China. However, fulfilled exports of U.S. corn, as reported for purposes of this analysis by U.S. exporters, total only 1.23 mmt.
- The negative price impact of this trade disruption has not been confined to U.S. corn prices. Other sectors of the U.S. grain value chain also have been affected negatively, including most notably DDGS and the soybean complex because of the substitutability of corn, DDGS and soybean meal in livestock and poultry rations, as well as the increased risk of detecting MIR 162 in U.S. DDGS and soybean shipments to China.
- Financial losses stemming from MIR 162-induced trade disruptions continue to mount. Losses to the U.S. corn, DDGS and soybean sectors of the U.S. grain industry are estimated to range from \$1 billion to \$2.9 billion.
- Regaining and maintaining access to the Chinese import market is critically important to both the short-and long-term prospects for U.S. agriculture, given the current size and projected growth in China's imports of corn, DDGS and soybeans. USDA currently forecasts China's corn imports to increase from 2.7 mmt in 2012 to 22 mmt by 2023, which would account for nearly half the projected growth in world corn trade. Figure 1 displays China's imports over the last 15 years and USDA's 10-year projection of rising demand.



## Overview

Since mid-November 2013, China has enforced a zero tolerance for Syngenta's MIR 162 because of the trait's lack of approval for import. Consequently, the brisk corn trade that existed previously between the United States and China came to a halt, and other costly actions began to occur, such as testing of shipments; delays in discharge; and deferrals, diversions and rejections of cargoes. Further, a serious adverse economic impact on U.S. DDGS trade began in December that included the rejection of at least 2,000 mt. Moreover, a concurrent downward pressure was exerted on soybean meal prices and U.S. soybean exports.

## Analysis

This analysis quantifies the economic losses sustained by U.S. corn exporters, describes impacts on the DDGS market and soybean complex, and projects impacts on the rest of the U.S. agricultural economy during the 2013/14 corn and soybean marketing year. This analysis is based upon the assumption that adverse economic impacts associated with shipment disruptions – and the ensuing decline in U.S. prices for corn, DDGS, soybean meal, soybeans and related products – have not been offset by Syngenta, given its stated unwillingness to do so.

### U.S. Supply and Demand for Corn and DDGS

For a perspective on the importance of exports to both the U.S. corn and DDGS markets, supply and demand balance sheets are included in Tables 1 and 2. For the marketing years encompassing 2006/07 through 2013/14, exports have averaged 14% of total corn demand and 20% of total DDGS demand. After corn exports lost market share to more inelastic ethanol demand following the drought-reduced 2012 crop, exports rebounded in 2013/14 and have been instrumental in sustaining U.S. corn market prices above break-even levels for producers.

Table 1: U.S. supply and demand for corn (million bushels) 1/

Item	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Beginning stocks	1,967	1,304	1,624	1,673	1,708	1,128	989	821
Production	10,531	13,038	12,092	13,092	12,447	12,360	10,780	13,925
Imports	12	20	14	8	28	29	162	35
Total Supply	12,510	14,362	13,729	14,774	14,182	13,517	13,932	14,781
Feed & residual	5,540	5,858	5,182	5,126	4,799	4,557	4,335	5,300
Food, seed, & industrial	3,541	4,442	5,025	5,961	6,426	6,428	6,044	6,400
Ethanol and by-products	2,119	3,049	3,709	4,591	5,019	5,000	4,648	5,000
Domestic use	9,081	10,300	10,207	11,087	11,225	10,985	10,379	11,700
Exports	2,125	2,437	1,849	1,979	1,830	1,543	731	1,625
Total Demand	11,207	12,737	12,056	13,066	13,055	12,528	11,111	13,325
Ending stocks	1,304	1,624	1,673	1,708	1,128	989	821	1,456

1/ As of March 2014.

Table 2: U.S. supply and demand for DDGs (1,000 metric tons) 1/

Year	Production 2/	Imports		Exports	Domestic Use
		Supply	Demand		
2013/14	38,555	NA	NA	NA	NA
2012/13	35,841	414	8,195	28,060	31,325
2011/12	38,555	351	7,581		
2010/11	38,702	429	8,286		
2009/10	35,402	409	8,279	27,531	
2008/09	28,600	251	4,969	23,883	
2007/08	23,511	145	3,921	19,735	
2006/07	16,340	191	1,780	14,751	

1/ As of March 2014.

2/ Assumes 17 pounds of DDGs per bushel of corn used for ethanol.

#### U.S. Corn and DDGS Exports

According to USDA forecasts, U.S. corn exports to China currently are projected to reach 22 mmt by 2023, accounting for nearly half the projected growth in total world corn trade. Of course, there is no guarantee that the United States will be the principal exporter to this potentially dynamic market. Other corn exporting nations, such as Ukraine, are capable of replacing the United States as the principal exporter to China if issues such as unapproved biotech traits continue to disrupt trade between the United States and China.

Annual U.S. corn exports to primary destinations are shown in Table 3. As of December 2013, USDA projected Chinese imports for 2013/14 to reach 7 mmt. However, USDA in January 2014 reduced its projection to 5 mmt in response to the halt in corn trade between the United States and China. According to USDA's Foreign Agricultural Service (FAS), U.S. corn export commitments to China for the 2013/14 marketing year as of March 20, 2014 amount to 4.1 mmt, down from 4,695 mmt in mid-November 2013 when the export rejections began.

Further downward revisions for corn export commitments are anticipated because of the halt in U.S. corn trade with China.

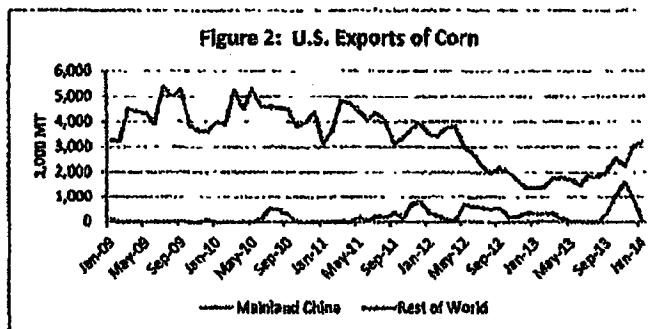
Table 3: U.S. exports of corn (1,000 metric tons) 1/

Country/region	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Japan	15,109	14,689	15,519	15,128	13,914	13,518	6,866	
Mexico	8,768	9,818	7,641	8,253	7,483	10,182	4,581	
China (Mainland)	49	9	90	1,199	980	5,146	2,417	
Venezuela	515	974	1,204	1,106	856	1,936	1,078	
China (Taiwan)	4,329	8,844	3,609	3,181	2,737	1,553	528	
Canada	2,050	9,140	1,842	2,098	958	870	469	
South Korea	4,043	8,556	5,196	7,076	6,173	3,564	451	
Saudi Arabia	418	1,053	504	755	576	362	346	
Cuba	538	810	684	583	454	475	274	
Jamaica	255	248	236	234	283	253	243	
Other	17,914	18,773	10,240	10,657	12,118	3,924	1,326	
Total	53,987	61,913	46,965	50,270	46,481	39,182	18,579	41,277

1/ Marketing year is September - August. Source: Bureau of the Census/Foreign Trade Statistics for 2006/07 - 2012/13.

2/ World Agricultural Supply and Demand Estimate (WASDE) projection as of March 2014.

U.S. corn exports to China had gained significantly over the last five marketing years, as depicted in Figure 2. However, corn trade between the United States and China declined drastically in January 2014 after the trade disruption resulting from detection of MIR 162. USDA projects the upward trend to resume in the out years, contingent upon renewal of corn trade between the United States and China.



Trade between the United States and China is perhaps even more important as a share of demand to the DDGS market than to the corn market. Beginning in 2009/10, China became the largest customer for U.S. DDGS, and has imported 2.541 mmt during the first five months of the 2013/14 marketing year (Table 4). USDA does not forecast DDGS exports. However, based upon the pace through January 2014, U.S. DDGS exports to China could exceed 6 mmt for 2013/14, more than twice the previous record level.

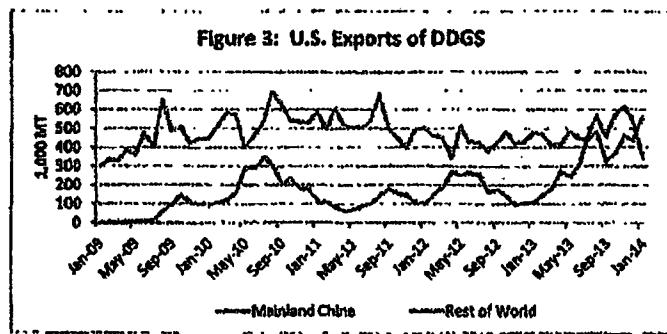
Table 4: U.S. exports of DDGs (1,000 metric tons) 1/

Country/region	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
China (Mainland)	1	5	98	2,177	1,588	2,228	2,808	2,541
Mexico	608	1,001	1,387	1,613	1,823	1,534	1,277	
Canada	190	683	714	1,078	882	647	524	
Japan	79	151	211	229	285	338	298	
South Korea	88	176	279	351	385	377	376	
Vietnam	48	101	184	363	455	456	374	
Turkey	18	403	380	559	41	122	298	
European Union	204	168	117	265	728	138	286	
Thailand	51	380	270	289	269	179	254	
China (Taiwan)	126	173	179	150	192	240	228	
Other	368	930	1,150	1,198	1,643	1,322	1,371	2,152
Total	1,780	3,921	4,969	8,279	8,286	7,581	8,195	4,694

1/ Marketing year is September - August. Source: Bureau of the Census/Foreign Trade Statistics for 2006/07 - 2012/13.

2/ Monthly Sales for September 2013 - January 2014.

Figure 3 illustrates China's importance to the DDGS market. In the last half of 2013, China was importing more DDGS from the United States than all other countries combined. However, after the trade disruption attributable to detection of MIR 162, U.S. DDGS exports to China declined in January 2014.



#### Weekly Corn Exports and Inspections for 2013/14

The FAS reports weekly U.S. export sales for corn and issues weekly updates to reflect the actual final destination of shipments. As can be viewed in Table 5, U.S. weekly corn exports to China for 2013/14 reached 2,592 mmt by January 2, 2014, but almost flat lined thereafter because of shipment diversions, cancellations and deferrals. Since December 2013, FAS has been reducing accumulated exports to China, and likely will continue to make downward adjustments to reflect U.S. exports that failed to materialize.

Total U.S. corn export commitments to China, which consist of accumulated exports plus outstanding sales, were 4,695 mmt in mid-November 2013 when the rejections began. But those commitments by March 20, 2014 had decreased to 4,053 mmt because of shipment diversions and cancelled sales triggered by the response to detections of MIR 162. USDA's import projection for China was 7 mmt in December 2013, dropped to 5 mmt in January 2014 and may decline further unless other foreign corn exporters displace the lost U.S. exports.

Table 5: Weekly corn export sales to China (1,000 metric tons)

Date	Weekly Exports	Accumulated Exports	Outstanding Sales	Gross Sales	Net Sales	Total Commitments
3/20/14	0	2,670	1,383	8	-10	4,053
3/13/14	0	2,670	1,392	69	69	4,062
3/6/14	0	2,670	1,323	57	-17	3,993
2/27/14	1	2,670	1,439	110	-71	4,109
2/20/14	11	2,669	1,512	0	-3	4,181
2/13/14	0	2,658	1,525	3	-19	4,184
2/6/14	6	2,658	1,544	0	-228	4,202
1/30/14	6	2,652	1,778	234	-72	4,430
1/23/14	14	2,646	1,856	2	0	4,503
1/16/14	14	2,632	1,871	77	76	4,503
1/9/14	26	2,618	1,809	0	-170	4,427
1/2/14	93	2,592	2,004	70	-57	4,597
12/26/13	155	2,500	2,154	66	-116	4,654
12/19/13	141	2,345	2,425	74	-44	4,770
12/12/13	245	2,203	2,610	9	124	4,814
12/5/13	135	1,958	2,732	118	-124	4,690
11/28/13	277	1,823	2,991	63	52	4,814
11/21/13	209	1,546	3,216	135	67	4,762
11/14/13	163	1,337	3,357	11	145	4,695
11/7/13	121	1,174	3,375	74	116	4,550
10/31/13	76	1,053	3,381	241	172	4,434
10/24/13	499	977	3,285	491	598	4,262
10/17/13	0	478	3,186	0	0	3,664
10/10/13	0	478	3,186	0	0	3,664
10/3/13	185	478	3,186	171	231	3,664
9/26/13	115	294	3,140	3	115	3,433
9/19/13	119	179	3,140	76	181	3,318
9/12/13	60	60	3,128	10	65	3,188
9/5/13	0	0	3,123	129	6	3,123

Source: Foreign Agricultural Service

USDA's Federal Grain Inspection Service (FGIS) performs official inspections of U.S. corn shipments for export. Unlike FAS's weekly export sales reports, the FGIS inspection data is not corrected based upon actual export destinations. Rather, FGIS data reflects the intended export destination. As shown in Table 6, inspections for U.S. corn intended for export to China for 2013/14 were 3,922 mmt as of March 20, 2014. After a strong inspection pace during the first four months of the 2013/14 marketing year, inspections at the Gulf ceased as of December 12, 2013. Meanwhile, inspections of U.S. export corn shipments at Pacific Northwest ports continued for a while longer, but ceased as of January 9, 2013. U.S. corn trade with China has been virtually non-existent since January 2, 2014.

Table 6: Weekly corn inspections to China from U.S. (1,000 metric tons)

Date	Gulf	Pacific	Interior	Atlantic	Total	Accumulated Inspections
3/20/14	0	0	0	0	0	3,922
3/13/14	0	0	0	0	0	3,922
3/6/14	0	0	0	0	0	3,922
2/27/14	0	0	0	0	0	3,922
2/20/14	0	0	0	0	0	3,922
2/13/14	0	0	0	0	0	3,922
2/6/14	0	0	1	0	1	3,922
1/30/14	0	0	0	0	0	3,920
1/23/14	0	0	1	0	1	3,920
1/16/14	0	0	3	0	3	3,919
1/9/14	0	3	3	1	7	3,915
1/2/14	0	129	8	2	139	3,909
12/26/13	0	132	12	4	149	3,770
12/19/13	0	173	28	3	204	3,621
12/12/13	0	183	30	6	218	3,417
12/5/13	185	229	35	0	448	3,199
11/28/13	176	327	32	1	536	2,750
11/21/13	122	196	29	0	347	2,214
11/14/13	153	185	27	2	367	1,868
11/7/13	106	0	20	2	128	1,501
10/31/13	173	0	18	11	201	1,372
10/24/13	59	0	5	13	77	1,171
10/17/13	420	0	4	2	426	1,094
10/10/13	175	0	5	6	186	668
10/3/13	176	0	2	9	186	482
9/26/13	115	0	0	2	117	295
9/19/13	119	0	0	0	119	179
9/12/13	60	0	0	0	60	60
9/5/13	0	0	0	0	0	0

Source: AMS Report WA-GR101

#### U.S. Grain Export Industry Information on U.S. Corn Exports to China

To gain greater understanding than is available through USDA and Bureau of Census export reports, the NGFA and NAECA asked outside legal counsel to obtain and aggregate information from their member companies on U.S. corn export sales to China for the 2013/14 marketing year. It is believed that the collected aggregated data represents, as of the end of February 2014, most of the U.S. corn export sales to China for the 2013/14 marketing year.

As shown in Table 7, there were 4,561 mmt of U.S. corn sales to China, but only 1,234 mmt of fulfilled sales – significantly less than the 2.67 mmt reported by FAS as of February 27, 2014. The large difference between the industry data and the FAS data may be attributable to a lag in reporting to FAS.

Chinese corn shipment rejections before and after discharge, as reported by industry, total 1.45 mmt (0.457 mmt plus 0.993 mmt), which is substantially more than the 908,800 mt reported thus far by the Chinese government. Of significance is the 0.457 mmt reported by the U.S. export industry that was rejected after discharge. Recovering discharge for re-export requires an arduous effort and inordinate amount of time, with resulting economic costs.

Industry data reveals cancelled sales at 0.458 mmt and deferrals at 1.419 mmt. Presumably, deferrals will become cancellations or rolled into next year's sales if the disruption is not remediated in time for shipments to resume during the 2013/14 marketing year.

Table 7: 2013/14 U.S. corn sales with China - Industry Information (1,000 metric tons)

Marketing Year	Fulfilled	Rejected after Discharge	Rejected before Discharge	Cancelled	Deferred	Total
2013/14	1,234	457	993	458	1,419	4,561

A comparison of U.S. corn export sales to China from the Census Bureau and China corn imports from FAS shows that the United States was China's almost exclusive supplier of imported corn for the 2012/13 marketing year. If the United States would have been China's almost exclusive corn trading partner again in 2013/14, there would have been almost 7 mmt of U.S. corn exported to China during the 2013/14 marketing year had no disruption occurred (7 mmt was USDA's corn import forecast for China prior to the disruption). This calculates to 5.766 mmt (7 mmt - 1.234 mmt of fulfilled export sales) of lost U.S. corn exports attributable to the trade disruption. However, rather than assume the United States "lost" 5.766 mmt in corn export sales, this analysis takes a more conservative approach and assumes the United States lost only 3.827 mmt (4.561 mmt of booked U.S. corn export sales from industry data - 1.234 mmt of fulfilled corn export sales from industry data) of corn export sales to China.

#### Weekly Prices at Terminal Locations

Prices at major terminal locations for DDGS, corn, soybean meal and soybeans are displayed in Table 8. All four commodities made harvest-time lows during the late September 2013 through early November 2013 time frame, and then began to increase. However, the MIR 162-triggered disruption in the Chinese market caused new lows to be set for DDGS and corn prices in January 2014. Because of China's large share of U.S. DDGS demand, the disruption was detrimental especially for U.S. DDGS prices, which declined by between \$80/mt and \$100/mt at terminal locations in less than a month following the disruption. While corn prices did not suffer a large price loss, the price increase that would have been expected to follow surging exports to China failed to materialize.

Further, soybean meal prices have been affected adversely because of the substitutability of corn, DDGS and soybean meal in livestock and poultry rations. Soybean meal prices had been escalating in November 2013 and December 2013, but suddenly declined \$30/mt in January 2014. Soybean prices did not falter dramatically, but did not escape unscathed either. Soybean

bids were affected negatively by lower values for corn and increased risk of finding low levels of MIR 162 in U.S. soybean shipments to China.

Table 8: Weekly prices for DDGS, corn, soybean meal and soybeans (\$ per metric ton)

Date	Gulf	PNW	Chicago	Gulf	Chicago Export	Central IL	Gulf
	DDGS			Corn		Soymeal	Soybeans
3/21/2014	\$358	\$369	\$298	\$218	\$187	\$554	\$592
3/14/2014	\$353	\$359	\$298	\$228	\$189	\$528	\$584
3/7/2014	\$364	\$364	\$298	\$226	\$190	\$543	\$613
2/28/2014	\$342	\$358	\$287	\$219	\$180	\$569	\$596
2/21/2014	\$320	\$342	\$270	\$215	\$178	\$559	\$579
2/14/2014	\$342	\$333	\$265	\$208	\$173	\$562	\$568
2/7/2014	\$325	\$317	\$259	\$206	\$173	\$556	\$562
1/31/2014	\$303	\$303	\$254	\$204	\$169	\$533	\$548
1/24/2014	\$298	\$295	\$254	\$200	\$172	\$525	\$550
1/17/2014	\$281	\$287	\$254	\$196	\$165	\$522	\$570
1/10/2014	\$270	\$278	\$248	\$201	\$168	\$522	\$555
1/3/2014	\$231	\$259	\$204	\$197	\$165	\$522	\$548
12/27/2013	\$281	NA	\$267	\$199	\$166	\$551	\$565
12/20/2013	\$314	\$325	\$281	\$201	\$169	\$555	\$568
12/13/2013	\$336	\$331	\$292	\$197	\$166	\$541	\$564
12/6/2013	\$331	\$322	\$287	\$199	\$168	\$534	\$563
11/29/2013	\$336	\$324	\$281	\$197	\$164	\$534	\$557
11/22/2013	\$314	\$320	\$292	\$200	\$166	\$505	\$557
11/15/2013	\$303	\$309	\$292	\$201	\$164	\$505	\$544
11/8/2013	\$284	\$292	\$271	\$199	\$166	\$479	\$551
11/1/2013	\$300	\$303	\$276	\$201	\$166	\$479	\$537
10/25/2013	\$303	\$306	\$287	\$204	\$171	\$504	\$552
10/18/2013	\$294	\$297	\$276	\$203	\$170	\$484	\$548
9/27/2013	\$298	\$290	\$270	\$203	\$173	\$495	\$557
9/20/2013	\$292	\$301	\$287	\$203	\$172	\$524	\$556
9/13/2013	\$298	\$306	\$289	\$209	\$175	\$606	\$583
9/6/2013	\$291	\$299	\$289	\$216	\$220	\$602	\$588

Source: U.S. Department of Agriculture, Agricultural Marketing Service.

#### Losses for U.S. Corn Exporters

A large quantity of U.S. corn export sales to China for the 2013/14 marketing year were made before the beginning of the 2013/14 marketing year. In the months prior to the 2013/14 marketing year, corn prices were as much as \$3/bu. (or \$118/mt) greater than in mid-November 2013 through January 2014, when shipments were rejected and/or diverted, or cancelled/deferred. Thus, the negated U.S. corn export sales to China were of greater value than the replacement sales.

For this analysis, export sales prices for the rejected, cancelled and deferred corn sales are assumed conservatively to be \$50/mt greater than market prices in mid-November 2013 through January 2014, when the bulk of the deliveries to China were scheduled to be executed. The penalty for cancelled sales that was assessed by the Chinese on U.S. exporters for failing to deliver approved corn also is included in the estimated \$50/mt price loss. This analysis assumes deferred sales eventually will be cancelled. Based upon data provided by U.S. exporters for purposes of this analysis, the total volume of rejected (1.45 mmt), cancelled (0.458 mmt), plus deferred sales (1.419 mmt) is 3.327 mmt. A \$50/mt price decline on 3.327 mmt of lost corn exports rounds to \$166 million.

In addition, the countries that took delivery of the rejected corn almost assuredly would have negotiated a discount for early delivery on existing sales. Further, new sales would have been discounted even more given the compromised negotiating leverage of U.S. corn exporters. It is plausible to estimate U.S. corn exporters conservatively may have lost another \$30/mt on the sale of diverted corn, since they were placed in a compromised economic position. U.S. exporter-provided data shows 1.45 mmt of rejected corn; all of this corn is assumed to have been diverted for sale to another country. A \$30/mt price loss on 1.45 mmt of corn rounds to \$44 million.

Finally, freight rates from the U.S. Gulf to China were approximately \$50/mt in December 2013 when the majority of the rejections and/or diversions occurred. Contracted shipment time for loading at the U.S. Gulf through discharging at China is assumed to be 25 days. Daily demurrage is assumed to equal \$2/mt (\$50/mt freight rate / 25 days). If the rejections and/or diversions added five demurrage days to the contracted shipment time, the demurrage loss would be \$10/mt (\$2/mt x 5 days).

According to data collected from U.S. corn exporters for this analysis, the volume of corn rejected after discharge is 0.457 mmt, and the volume of corn rejected before discharge is 0.993 mmt. This totals 1.45 mmt. A \$10/mt demurrage loss on 1.45 mmt calculates to approximately \$15 million in demurrage costs. This estimate represents the low-side for demurrage costs because costs for recovering discharged corn for re-export may be substantially higher.

Adding the \$166 million market price loss on unfulfilled export sales, \$44 million price loss attributable to compromised U.S. exporter economic position on diverted sales and \$15 million demurrage loss equals a \$225 million loss for U.S. corn exporters.

Importantly, not included in this analysis are likely losses of U.S. corn export sales that may have been made in 2013/14 were it not for the disruption in sales and shipments to China resulting from MIR 162. Also not included in the analysis of costs to U.S. corn exporters are the damages from export disruptions for DDGS and soybeans.

#### **Losses for U.S. Grain Value Chain**

The interconnectivity of the grains markets suggests losses that affect corn, the largest U.S. grain in terms of volume, will affect other grains negatively, as well. However, for this analysis, losses are only estimated for corn, DDGS and soybeans.

#### **Corn**

The effect of Chinese rejections on U.S. corn prices is harder to estimate. A large price decrease did not occur, but reports of corn price losses were as much as \$0.50/bu. To be extremely conservative, a price model was created that assumes one-half of the 3.327 mmt of lost U.S. corn export sales to China will be replaced by increased U.S. domestic feed use, while the other one-half will accumulate to U.S. corn stocks. The model estimates that U.S. national average corn prices would be \$0.11/bu. greater if the MIR 162-related trade disruptions had not occurred. This is equivalent to a 2.4% price impact. The \$0.11/bu. impact is assessed for the last nine months of the marketing year, since the corn rejections began in mid-November 2013 and may not resume this marketing year.

The 2013 U.S. corn crop is assumed to be marketed to end users evenly throughout the marketing year. As of March 2014, USDA projected U.S. corn production for the 2013 crop at 13.925 billion bushels. Meanwhile, marketings during the last nine months of the marketing year to end users were estimated to be 10.4 billion bushels. A \$0.11/bu. price decline apportioned over 10.4 billion bushels results in a loss of \$1.144 billion for farmers selling corn.

#### **DDGS**

After the DDGS trade disruption occurred at the end of 2013, DDGS prices at terminal locations declined between \$80/mt and \$100/mt in January 2014. Prices subsequently have retraced the price loss, but a discount likely still exists. For this analysis, a DDGS price loss equivalent to the modeled corn price loss is assumed because of the substitutability of corn and DDGS in livestock and poultry feed rations. The modeled price loss for corn is 2.4%, and applying 2.4% to an assumed \$300/mt national average DDGS price equals \$7/mt. Similarly to the corn analysis, DDGS marketings for the last nine months of the 2013/14 marketing year are assumed to be consistent throughout the marketing year.

Approximately 17 pounds of DDGS are produced from every 56-pound bushel of corn used for ethanol manufacturing. Applying this ratio to USDA's March 2014 estimate of 5 billion bushels of corn used to produce ethanol for 2013/14 results in a DDGS production estimate of 38.555 mmt. The share of the annual DDGS production estimate over the last nine months of the marketing year is 28.9 mmt. Multiplying a \$7/mt loss by 28.9 mmt results in a \$202 million loss to sellers of DDGS.

#### **Soybeans**

Soybean bids were affected negatively by lower values for soybean meal and increased risk of detecting adventitious presence of MIR 162 in U.S. soybean shipments to China. Moreover, some U.S. corn exporters that also export soybeans have reported there have been reduced and cancelled sales stemming from the possibility of MIR 162 detection in soybean shipments.

**In this regard, NGFA and NAFGA are aware that several shipments of soybeans have been tested and detained by China after the detection of MIR 162.**

After reaching \$568/mt at the Gulf on December 20, 2013, soybean prices declined to \$548/mt on January 3, 2014. In the ensuing months, soybean prices have reached higher levels. But a price-depressing impact still exists because of the overhanging trade uncertainty that results in the incorporation of increased risk premiums in commercial pricing, which, in turn, reduce U.S. prices.

The Chinese import market is very important for U.S. soybeans, and trade uncertainty in this market can be very harmful to U.S. soybean prices. The importance of U.S. soybean exports to China is reinforced by USDA's projection that China's soybean import market will be 69 mmt in 2013/14, and that the United States will export 46% of its 2013 soybean crop. As of March 20, 2014, more than two-thirds of U.S. soybean export sales for the 2013/14 marketing year were to China.

Because of the uncertain trade environment for U.S. exports to China and the price linkage between other affected feedstuffs and soybean prices, the 2.4% modeled corn price loss is applied to the March 2014 national average soybean price of \$12.95/bu. This results in a price loss of a \$0.31/bu. during the last nine months of the 2013/14 marketing year for U.S. soybeans. To be extremely conservative and acknowledge that whole U.S. soybeans may not be as linked to U.S. corn prices as DDGS and soybean meal, the \$0.31/bu. estimate is more than halved to \$0.15/bu. for purposes of this analysis.

As of March 2014, USDA projects U.S. soybean production for the 2013 crop at 3.289 billion bushels. Marketings during the last nine months of the marketing year to end users are estimated to be 2.5 billion bushels. A \$0.15/bu. price loss applied to 2.5 billion bushels results in a cumulative loss of \$375 million for farmers selling soybeans.

#### **Total Losses for U.S. Grain Value Chain**

As presented previously, the following total economic losses are estimated for the U.S. grain value chain: 1) \$225 million to corn exporters; 2) \$1.144 billion for farmers selling corn; 3) \$202 million to sellers of DDGS; and 4) \$375 million for farmers selling soybeans. These losses total \$1.95 billion. A range of \$1 billion to \$2.9 billion is estimated around the \$1.95 billion mid-point estimate to acknowledge that the assumed price losses may have been more or less than estimated.

#### **Summary**

USDA currently is projecting Chinese corn imports will reach 22 mmt by 2023, which if realized would account for nearly half of the projected growth in total world corn trade. However, if the MIR 162-related trade disruption continues, other corn exporting nations, such as Ukraine, are capable of replacing the United States as the principal corn exporter to China.

China began importing U.S. DDGS heavily in 2009/10, and based upon import data through December 2013 is on track to import more than 6 mmt for 2013/14. If attained, that would account for nearly 16% of U.S. DDGS production. U.S. DDGS exports to China were disrupted at the end of 2013, and resumed in January 2014. But the impact of the disruption on DDGS prices has lingered.

In December 2013, USDA projected China would import 7 mmt of corn. However, USDA's projection for Chinese corn imports was reduced to 5 mmt in January 2014 when it became clearer that China would not resume importing U.S. corn in the near term. As of March 20, 2014, total commitments to China for U.S. corn exports were 4.053 mmt; but U.S. exporter-provided data shows that only 1.234 mmt of the commitments have been fulfilled.

The Chinese government has reported that 908,800 mt of U.S. corn have been officially rejected. However, rejections before and after shipment discharge, as reported by the U.S. export industry, are a combined 1.45 mmt. Export industry data also reveals cancelled sales at 0.458 mmt and deferrals at 1.419 mmt. Presumably, deferrals will become cancellations or rolled into next year's sales if the disruption is not remediated in time for shipments to resume during the 2013/14 marketing year. In total, 3.827 mmt of U.S. corn export sales to China potentially may be lost in 2013/14.

The disruption in U.S. corn exports to China has affected more than U.S. corn prices because of the substitutability of corn for other feedstuffs in livestock and poultry feed rations, as well as because of the increased risk of Chinese detection of the presence of MIR 162 in shipments of other U.S. commodities to China.

For the U.S. corn, DDGS and soybean sectors, the MIR 162-induced trade disruption has resulted in market price loss on unfulfilled export sales, price loss on diverted sales because of the compromised economic negotiating position of U.S. exporters, demurrage costs, and lower market prices for U.S. commodities and products. The total loss for these sectors of the U.S. grain industry is estimated to range from \$1 billion to \$2.9 billion.

# # #

*[Note: This analysis is based primarily upon publicly available data and fully disclosed assumptions stated herein. No company provided company-specific data to either NGFA or NAECA. This analysis is intended to provide a reasonable estimate of the economic losses sustained by market participants, which have resulted or will result from the commercialization of technology products prior to their approval for import in major U.S. export markets. As stated herein, this analysis does not consider or evaluate every potential loss, and, therefore, the estimates may be understated. Similarly, it does not attempt to analyze potential strategies for mitigating market risk that may be utilized by individual market participants based upon an assessment of their individual operations, customer base and markets, as these are decisions made by individual market participants. Neither NGFA nor NAECA, nor any member company of either association, guarantees the accuracy of the data utilized in this analysis, or the conclusions reached herein.]*

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Mark Von Nida

Clerk of Circuit Court

Third Judicial Circuit, Madison County Illinois

# EXHIBIT H

Ohio State University Extension: Your Link to Information, News, and Education



# FactSheet

Extension

## Ohio State University Extension Fact Sheet

### Horticulture and Crop Sciences

2021 Coffey Road, Columbus, OH 43210

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## Managing "Pollen Drift" to Minimize Contamination of Non-GMO Corn, AGF-153

AGF-153-04

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Department of Horticulture and Crop Science

Corn is a cross-pollinating crop in which most pollination results from pollen dispersed by wind and gravity. Pollen drift in corn has received considerable attention in recent years as the result of the development and widespread adoption of new seed technologies containing transgenes or genetically modified organisms (GMOs). Managing pollen drift has always been a major concern in the production of hybrid seed (to ensure genetic purity of inbreds) and specialty corn (to optimize expression of value-added traits, like high oil content). Pollen drift has now become an important consideration in the production of non-GMO corn as an Identity-Preserved (IP) grain crop. Producers of IP non-GMO grain are concerned that pollen drift from GMO hybrids will contaminate, by cross-pollination, nearby non-GMO corn. Farmers growing GMO hybrids approved for export also want to avoid contamination of their crops by GMO corns that have not yet received approval in overseas markets (Nielsen, 2003a).

A significant percentage of U.S. IP corn is earmarked for overseas markets with rigorous GMO restrictions. Japan has set a zero tolerance for seed and food imports containing *unapproved* GMO material, e.g. StarLink corn (containing the Cry9C Bt transgene); food products containing less than 5% of approved biotech crops like corn and soybeans can be labeled as non-GMO. The European Union (EU) guidelines require that foods, including grains, containing more than 0.9% biotech material be labeled as genetically engineered. Producers of non-GMO corn need to minimize pollen contamination by GMO corn if they are to obtain premiums associated with IP grain contracts. As GMO corn acreage in Ohio increases with the introduction of Bt rootworm corn and wider use of other types of Bt and Roundup Ready corn, the potential for contamination of non-GMO corn is increasing. If growers want to produce non-GMO IP corn successfully, they need to become familiar with some physical and biological characteristics of corn pollen, potential distances that pollen can travel, and planting

practices that reduce the risk of pollen contamination by nearby GMO corn fields.

### **Characteristics of corn pollen affecting "drift"**

Corn pollen is spherical and much larger than the pollen produced by most grasses (Burris, 2002; Gray, 2003). Corn pollen is among the largest particles found in the air. Although it is readily dispersed by wind and gravity, it drifts to the earth quickly (about 1 foot/second) and normally travels relatively short distances compared to the pollen produced by other members of the grass family. Pollen may remain viable from a few hours to several days. Pollen can survive up to nine days when stored in refrigerated conditions. However, under ambient field conditions, pollen is viable for only 1 to 2 hours. High temperatures and low humidity reduce viability. Elevated temperatures have a greater negative impact on pollen viability than humidity, with viability greatly reduced at temperatures above 100 degrees F. At flowering, 60% of pollen fresh weight consists of water; pollen longevity diminishes rapidly if the water content drops below 40%. Corn plants typically shed pollen for 5 to 6 days, whereas a whole field may take 10 to 14 days to complete pollen shed, due to the natural variation in growth and development among plants (Nielsen, 2003b). Peak pollen shed generally occurs 2 to 3 days after 50% of the plants have shed pollen. Individual corn plants produce 4 to 5 million pollen grains. Therefore, even if only a small percentage of the total pollen shed by a field of corn drifts into a neighboring field, there is considerable potential for contamination through cross pollination.

### **How far can corn pollen travel?**

Many studies have been conducted to determine how far pollen will travel ◊ some have evaluated the density of pollen at varying distances from a corn source, whereas others have measured pollen drift by measuring outcrossing in neighboring corn. This latter approach is probably more meaningful when it comes to assessing the impact of pollen drift from GMO corn fields.

Once released from the anthers into the atmosphere, pollen grains can travel as far as ◊ mile with a 15 mph wind in a couple of minutes (Nielsen, 2003b). However, most of a corn field's pollen is deposited within a short distance of the field. Past studies have shown that at a distance of 200 feet from a source of pollen, the concentration of pollen averaged only 1% compared with the pollen samples collected about 3 feet from the pollen source (Burris, 2002). The number of outcrosses is reduced in half at a distance of 12 feet from a pollen source, and at a distance of 40 to 50 feet, the number of outcrosses is reduced by 99%. Other research has indicated that cross-pollination between corn fields could be limited to 1% or less on a whole field basis by a separation distance of 660 ft., and limited to 0.5% or less on a whole field basis by a separation distance of 984 ft. However, cross-pollination could not be limited to 0.1% consistently even with isolation distances of 1640 ft.

Several studies have been performed evaluating the impact of pollen drift from GMO fields on neighboring non-GMO fields. A Colorado study (Byrne et al. 2003) tracked the drift of pollen from blue corn and GMO Roundup Ready corn into adjacent conventional corn. Corn with marker traits (blue kernels or Roundup herbicide tolerance) was planted adjacent to corn without those traits. Cross pollination was greatest at the closest sampling site ◊ up to 46% outcrossing about 3 ft. from the edge of the test plots containing blue corn. Cross pollination dropped off rapidly with only 0.23% cross pollinated kernels near the blue corn plot at 150 ft. Only 0.75% of the corn showed cross-pollination with the Roundup Ready plot at 150 ft. The farthest distance any cross pollination was detected was 600 ft. These results suggest that 150 ft. may be a reasonable buffer between GMO and non-GMO corn to prevent significant cross pollination due to pollen drifting from one field to another.

## Planting practices to minimize GMO pollen contamination

### *Isolation and Border Rows*

One of the most effective methods for preventing pollen contamination is use of a separation or isolation distance to limit exposure of non-GMO corn fields from pollen of GMO fields. The potential for cross-pollination decreases as the distance between GMO and non-GMO corn fields increases. Several state seed certification agencies that offer IP grain programs for corn programs require that non-GMO IP corn be planted at a distance of at least 660 ft. from any GMO corn. This isolation distance requirement may be modified by removing varying numbers of non-GMO border rows, the number of which is to be determined by the acreage of the non-GMO IP corn field. The border rows ensure that the non-GMO field is "flooded" with non-GMO pollen which will dilute adventitious pollen from a GMO source.

- For corn fields over 20 acres in size, the isolation distance (of 660 ft.) may be modified by post pollination removal of 16 border rows if the actual isolation distance is less than 165 feet
- For corn fields over 20 acres in size, the isolation distance may be modified by post pollination removal of 8 border rows if the isolation distance is between 165 and 660 feet.

These isolation and border row requirements are designed to produce corn grain that is not more than 0.5% contaminated with GMOs.

### *Planting Dates and Hybrid Maturity*

Use of different planting dates and hybrid maturities can also be used to reduce the risk of cross-pollination between fields of GMO and non-GMO corn. For example, planting short season non-GMO corn hybrids followed by full season GMO hybrids later will reduce the chance for pollen from the GMO field to fertilize the early planted, earlier maturity non-GMO hybrid in an adjacent field. However, there are shortcomings with this approach. Differences in maturity between the early and late hybrid may not be large enough to ensure that the flowering periods of each hybrid will not overlap, especially when certain climatic conditions may accelerate or delay flowering. Moreover this strategy will only work if you control the adjacent fields or can closely coordinate your corn planting operations with those of your neighbors.

### *Prevailing Wind Direction*

In Ohio, the importance and consistency of relative wind direction during pollen shed has not been established. However, in states to the west of Ohio, the south and west edges of non-GMO fields are often more vulnerable to pollen drift because the prevailing winds during the summer are from the southwest. Therefore, it may be beneficial to follow recommendations regarding isolation distances and border row on these sides of non-GMO fields.

### *Other Considerations*

Other factors that can negatively impact non-GMO grain purity are volunteer corn plants resulting from no-till or minimum till continuous corn, purity level of the seed planted, planting errors, and drought or flood conditions which stunt border rows and reduce desirable pollen production and flow.

Planting operations to control pollen drift are only part of the process of producing an IP corn grain crop. Other major issues include harvesting, drying and storage, along with thorough record keeping. Seed certification agencies like the Ohio Seed Improvement Association (<http://www.ohseed.org/>) offer IP programs for grain. These IP programs, which are similar to seed certification, assist in preserving the genetic identity of a product, and verify specific traits through field inspections, laboratory analysis, and record keeping.

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Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.

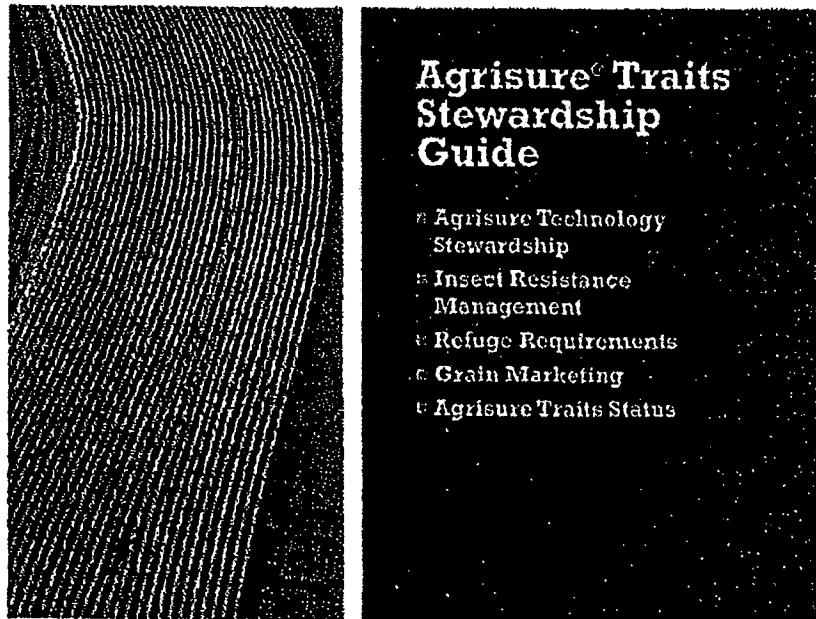
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Keith L. Smith, Associate Vice President for Ag. Adm. and Director, OSU Extension.

TDD No. 800-589-8292 (Ohio only) or 614-292-6181

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# EXHIBIT I



*Agrisure*<sup>®</sup>

## Table of Contents

**Thank you for choosing  
Agrisure® technology**



Congratulations on your purchase of Agrisure® Corn Traits! Agrisure technology offers a full line of high-performing corn traits with herbicide tolerance and insect protection that are built for maximizing the yield potential of your hybrids.

Agrisure GT provides exceptional tolerance to in-crop applications of glyphosate-based herbicides. Corn hybrids with Agrisure GT are carefully selected to provide not only outstanding glyphosate tolerance via the trait, but also to preserve the genetic potential of the hybrid via the proven advanced trait transformation process.

Agrisure CB/LL allows hybrids to reach their maximum yield by providing excellent control of European corn borer (ECB) plus other damaging insects. Agrisure CB/LL features the Bt11 event, which has been protecting cornfields since it was introduced in 1997. In addition, all hybrids with Agrisure CB/LL are tolerant to LIBERTY® herbicide (glufosinate), providing growers with another trait option for weed control.

Agrisure RW offers excellent built-in control of Northern, Western and Mexican corn rootworms in leading hybrids, offering outstanding yield results. Agrisure RW has been placed in leading Syngenta genetics utilizing an industry-leading trait transformation process that ensures hybrids will reach their full yield potential.

Innovative stacked combinations are available in 2008, including Agrisure GT/RW, Agrisure GT/CB/LL, Agrisure CB/LL/RW and Agrisure 3000GT (GT/CB/LL/RW).

## **Agrisure Technology Stewardship**

A strong stewardship program is essential for protecting and preserving the long-term value of Agrisure trait technology. Embracing this responsibility provides growers with ongoing choices and ensures they remain good stewards of the land.

Prior to planting corn hybrids with Agrisure traits, you are required to sign an Agrisure Stewardship Agreement. This agreement outlines the terms and conditions of growing hybrids with Agrisure traits, including the terms of a limited license under Syngenta's intellectual property, compliance with EPA-mandated IRM programs and grain channeling requirements.

Syngenta will keep all returned agreements on file, periodically providing updates, if necessary, to keep growers informed of any new recommendations or requirements.

In addition, planting hybrids with Agrisure GT, Agrisure CB/L or Agrisure RW (including any stack combinations) requires special considerations which are outlined in this publication.

## **Insect Resistance Management**

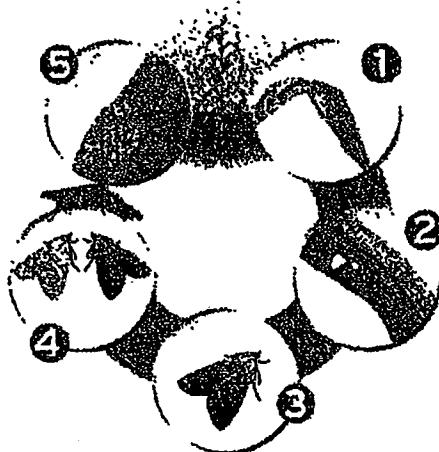


*Planting Refuges, Preserving Technology*

The U.S. Environmental Protection Agency (EPA) requires a refuge on every farm that plants insect-protected corn hybrids. Failure to plant the appropriate refuge jeopardizes your continued access to Agrisure technology.

Insect resistance management is a series of production practices that delay or prevent pests from developing resistance to insect-protected hybrids. An important component of a successful management plan is to plant a block of corn that does not control the target pest(s), known as a refuge, near your insect-protected corn hybrids. The refuge sustains a population of susceptible target pests to mate with any rare resistant species that may emerge from these same or nearby corn hybrids.

**Using ECB As An Example - How A Refuge Strategy  
Can Prevent Or Slow Resistance**



- ① Corn borers emerge and attempt to feed on corn hybrids with Agrisure CB/LL.
- ② Corn borer larvae ingest proteins from corn hybrids with Agrisure CB/LL and vast majority of borers die within 72 hours.
- ③ A very few rare resistant corn borers may live to mature to moths.
- ④ These rare resistant moths encounter susceptible moths from nearby refuge. When they mate, their offspring remain susceptible to corn hybrids with Agrisure CB/LL.
- ⑤ These susceptible moths lay eggs and the cycle begins again.

**IRM Compliance Assurance Program**

Syngenta Seeds and other industry registrants of trait products that provide insect-protected hybrids have cooperatively developed the EPA-mandated Insect Resistance Management (IRM) Compliance Assurance Program. This program requires corn seed companies to evaluate the extent to which growers are adhering to the IRM requirements and ensure that those who do not are brought back into compliance. Growers who do not meet IRM requirements for two consecutive years will be denied access to hybrids with Agrisure insect-protected traits in the third year.

### **On-Farm Assessments**

To assess compliance, Syngenta Seeds and other seed companies will conduct on-farm IRM assessments of randomly selected customers who purchased hybrids with Agrisure insect-protected traits. Following each on-farm assessment, it will be determined if the grower is in compliance.

### **Responding to Non-Compliance**

All growers found to be out of compliance will receive a letter informing them of their compliance infraction, reminding them of their compliance obligations, and the consequences of not adhering to the requirements. Included in each letter will be further instructional information on how to develop and implement a suitable IRM program for their farm. Additionally, any grower found to be out of compliance will receive a follow-up IRM assessment the next growing season.

### **IRM Tips Line**

Seed companies that sell insect-protected hybrids are required by the EPA to establish a system to collect information about alleged instances of non-compliance with the IRM requirements. Syngenta Seeds has established a toll-free IRM Tips & Complaints phone line, which is 1-866-SYNGENT.

### **Other IRM Tools**

Use the Insect Resistance Management Learning Center (IRMLC) to learn more about IRM. It is a web-based tool developed by the National Corn Growers Association (NCGA) with the support of Syngenta and other leading agricultural biotechnology companies. The IRMLC allows corn growers to access training on several topics, including IRM, Compliance Assurance Program (CAP), Integrated Pest Management (IPM), corn borer and corn rootworm. The IRMLC can be accessed directly at [www.agrisuretraits.com](http://www.agrisuretraits.com) or [www.ncga.com](http://www.ncga.com).

### Agrisure RW vs Agrisure CB/LL Refuge Requirements

Agrisure products containing Agrisure RW require a refuge plan that differs from refuge plans that growers have become accustomed to with corn borer protected corn such as Agrisure CB/LL. The table below highlights the main differences in their requirements:

	Agrisure CB/LL	Agrisure RW
Size of Refuge	A minimum of 20% total corn acres in 10% in adjacent grouping areas.	Minimum of 20% total corn acres in all areas.
Refuge Distance	Within one-half (1/2) mile of Agrisure CB/LL corn fields.	Within or adjacent (e.g., across the road) to Agrisure RW corn fields.
Refuge Insecticide Use	May be applied as a refuge only if economic thresholds are reached. If economic thresholds cannot be met, refuge insecticides may be applied.	Soil applied and seed applied insecticides may be used. Insecticides used to control corn rootworm adults may be used if Agrisure RW is treated also.

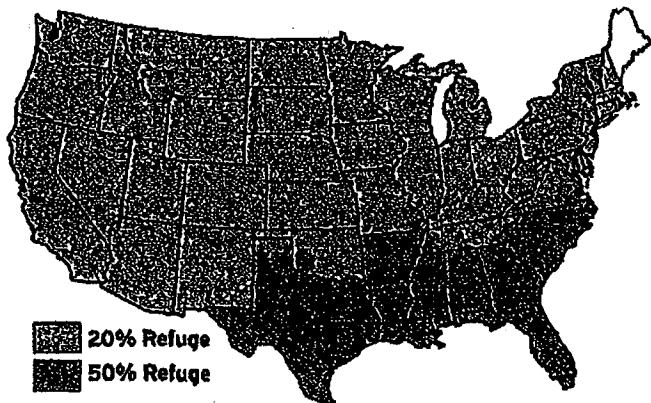
For products that contain stacked insect protection traits (such as Agrisure CB/LL/RW and Agrisure 3000GT) the refuge plan must meet both the requirements of the Agrisure CB/LL and Agrisure RW. (Please refer to the associated trait section for complete refuge requirements.)

## **Agrisure CB/LL and Agrisure GT/CB/LL Refuge Requirements**

Agrisure products containing Agrisure CB/LL (including the stack combination Agrisure GT/CB/LL) require a corn borer refuge plan. A corn borer refuge is a field or area of corn that does not contain Agrisure CB/LL or other trait products for controlling ECB. Each grower planting corn hybrids with Agrisure CB/LL must plant his own refuge. The refuge may be planted in a variety of configurations as illustrated in this stewardship guide. Specific requirements for the corn borer refuge are as follows:

- 1. A minimum of 20 percent of field corn acres must be planted to corn hybrids that do not control corn borer (the corn borer refuge may contain corn hybrids that control corn rootworm, such as Agrisure RW). If you plant corn hybrids with Agrisure CB/LL in cotton-growing regions (see p. 8 for map and list of cotton-growing areas), you must plant a minimum of 50 percent refuge.**
- 2. The corn borer refuge must be placed within one-half mile of corn hybrids with Agrisure CB/LL; however, a one-fourth (1/4) mile distance is preferred.**
- 3. A neighbor's field does not meet the refuge requirement.**
- 4. Refuge Insecticide Treatment requirements:**
  - a. Insecticide treatment for controlling European Corn Borer (ECB), corn earworm (CEW) and/or Southwestern Corn Borer (SWCB) may be applied to the refuge if economic thresholds are reached for one or more of these target pests. Contact local or regional professionals, such as your county extension agent, if you have questions regarding the economic threshold of target pests.**
  - b. Bt-based microbial insecticides may not be applied to the corn refuges.**
- 5. The corn borer refuge should be planted with a hybrid that is agronomically similar to and managed similar to your corn with Agrisure CB/LL.**

**Cotton-Growing\* Regions Required to Plant  
50% Refuge Corn**



Alabama – all counties

Arkansas – all counties

Florida – all counties

Georgia – all counties

Louisiana – all counties

Mississippi – all counties

Missouri – counties of:

Dunklin Scott

New Madrid Stoddard

Pemiscot

North Carolina – all counties

Oklahoma – counties of:

Beckham Jackson

Caddo Kay

Comanche Kiowa

Custer Tillman

Greer Washita

Harrison

South Carolina – all counties

Tennessee – counties of:

Carroll Haywood

Chester Lake

Crockett Lauderdale

Dyer Lincoln

Fayette Madison

Franklin Obion

Gibson Rutherford

Hardenman Shelby

Hardin Tipton

Texas – all counties EXCEPT:

Carson Lipscomb

Dallam Moore

Hansford Ochiltree

Hawley Roberts

Hutchinson Sherman

(NOTE: these counties are  
required to plant at least  
20% refuge corn)

Virginia – counties of:

Dinwiddie Southampton

Franklin City Suffolk City

Greenville Surrey

Isle of Wight Sussex

Northampton

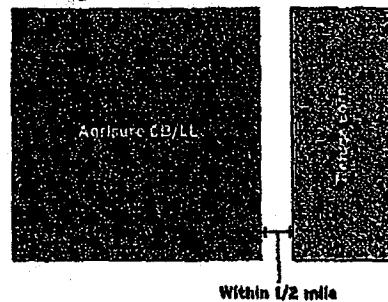
\* Identified by EPA as cotton  
growing areas.

### Corn Borer Refuge Configurations

#### Examples of Refuge Configuration Options

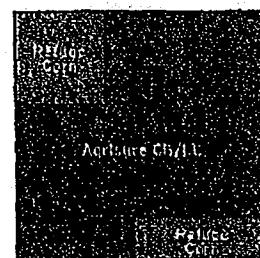
##### Separate Fields

The refuge field is planted to only refuge hybrids and does not contain any corn hybrids with Agrisure CB/LL. In this pattern as well as others, the refuge must account for at least 20 percent of the total corn acres and must be planted within 1/2 mile of the corn hybrids with Agrisure CB/LL.



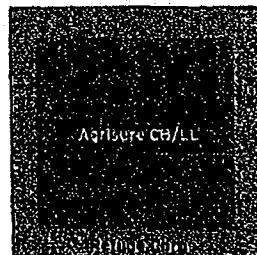
##### Blocks

Refuge corn and corn hybrids with Agrisure CB/LL are planted in large blocks in the same field.



##### Perimeter

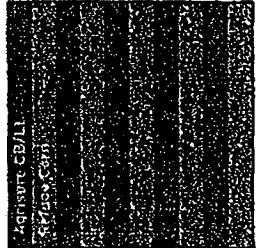
Refuge is planted around the sides of the field. Requires planting a minimum of 4 rows wide (preferably 6 rows) of refuge corn.



-  Agrisure CB/LL  
or Agrisure GT/CB/LL
-  Corn Borer Refuge

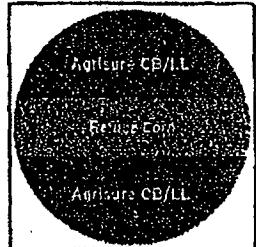
Refugee corn strips must be at least 4 rows (preferably 6 rows) wide.

**Adjacent Multiple Rows**



Strip of refuge corn between two areas of corn with Agrisure CB/LL in an irrigated field.

**Block Within Pivot**



■ Agrisure CB/LL  
or Agrisure GT/CB/LL  
■ Corn Borer Refuge

## **Agrisure RW and Agrisure GT/RW Refuge Requirements**

Agrisure products containing Agrisure RW (including the stack combination Agrisure GT/RW) require a corn rootworm refuge plan. A corn rootworm refuge is a field or area of corn that does not contain Agrisure RW or other trait products for controlling corn rootworm. Each grower planting corn hybrids with Agrisure RW must plant his own corn rootworm refuge. The corn rootworm refuge may be planted in a variety of configurations as illustrated in this stewardship guide. Specific requirements for the corn rootworm refuge are as follows:

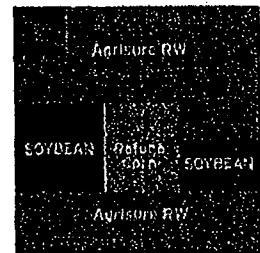
1. A minimum of 20 percent of field corn acres must be planted to corn hybrids that do not control corn rootworm (the corn rootworm refuge may contain corn hybrids that control corn borers, such as Agrisure CB/AJ).
  2. Corn rootworm refuge planting options include blocks within or adjacent to Agrisure RW corn fields, perimeter strips or in-field strips.
    - a. The corn rootworm refuge must be planted within or immediately adjacent (e.g., across the road) to Agrisure RW corn fields.
    - b. Corn rootworm refuge planted as in-field or perimeter strips must be at least 4 consecutive rows wide, but the preference is for 6 rows.
  3. A neighbor's field does not meet the refuge requirement.
4. Refuge Insecticide Treatment Options
  - a. The corn rootworm refuge corn acres can be treated for corn rootworm larvae and other soil pests with a soil-applied or seed-applied insecticide.
  - b. Insecticides labeled for control of corn rootworm adults can be applied to the corn rootworm refuge provided the field with Agrisure RW corn hybrids is treated in a similar manner.
5. The corn rootworm refuge should be planted with a hybrid that is agronomically similar to and managed similar to your corn with Agrisure RW.
6. The corn rootworm refuge should be planted in fields with a similar history as the Agrisure RW.
  - a. If the corn rootworm refuge is planted in a field that is in a crop rotation system, the corn hybrids with Agrisure RW must also be planted in a field that is in a crop rotation system.
  - b. If the corn rootworm refuge is planted on continuous corn, the corn hybrids with Agrisure RW may be planted on either continuous or in a crop rotation system.

### **Corn Rootworm Refuge Configurations**

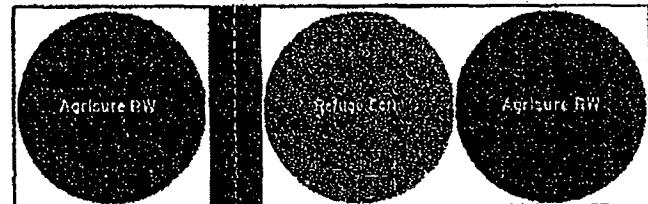
#### **Examples of Refuge Configuration Options**

##### **Adjacent Fields**

The refuge field is planted to only refuge hybrids and does not contain any corn hybrids with Agrisure RW. In these patterns the refuge must be planted in either an adjacent field or in fields separated by a road, path or ditch.

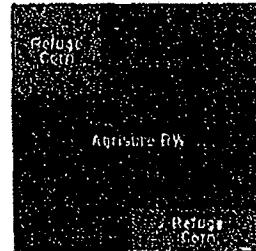


##### **Separated By a Road**



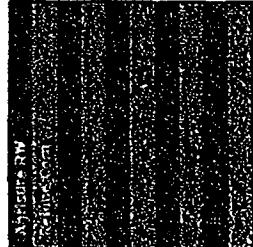
##### **Blocks**

Refuge corn and corn hybrids with Agrisure RW are planted in large blocks in the same field.



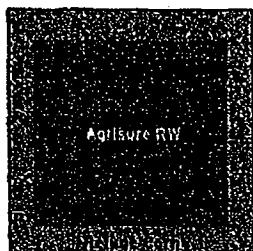
Refuge corn strips must be at least 4 rows (preferably 6 rows) wide.

#### Adjacent Multiple Rows



Refuge is planted around the sides of the field. Requires planting a minimum of 4 rows wide (preferably 6 rows) of refuge corn.

#### Perimeter



AgriSure RW  
or AgriSure GT/RW  
 Corn Rootworm Refuge

## **Agrisure CB/LL/RW and Agrisure 3000GT Refuge Requirements**

Agrisure products containing the stacked insect protection traits Agrisure CB/LL and Agrisure RW require a refuge plan. Two refuge options are available to growers planting corn hybrids with Agrisure CB/LL/RW (including the stack combination Agrisure 3000GT). The first option, planting a block of corn that serves as a refuge for both corn borers and corn rootworms, is referred to as a *common refuge*.

The second option available to growers requires planting a *separate refuge* for corn borers and a *separate refuge* for corn rootworms.

### **Common Refuge Planting Requirements**

A *common refuge* is a field or area of corn that does not contain Agrisure CB/LL/RW or other trait products for controlling corn borers and/or corn rootworms. Each grower planting corn hybrids with Agrisure CB/LL/RW must plant his own refuge. The refuge may be planted in a variety of configurations as illustrated in this stewardship guide. Specific requirements for the *common refuge* are as follows:

1. A minimum of 20 percent of field corn acres must be planted to corn hybrids that do not control corn borer and/or corn rootworm. If you plant corn hybrids with Agrisure CB/LL/RW in cotton-growing regions, you must plant a minimum of 50 percent refuge (see p. 8 for map and list of cotton growing areas).
2. *Common Refuge* planting options include blocks adjacent to Agrisure CB/LL/RW corn fields, perimeter strips or in-field strips.
  - a. The *common refuge* must be planted within or immediately adjacent (e.g., across the road) to Agrisure CB/LL/RW corn fields.
  - b. *Common refuge* planted as in-field or perimeter strips must be at least 4 consecutive rows wide, but the preference is for 6 rows.
3. A neighbor's field does not meet the refuge requirement.
4. *Common Refuge* insecticide treatment requirements:
  - a. Insecticide treatment for controlling European Corn Borer (ECB), corn earworm (CEW) and/or Southwestern Corn Borer (SWCB) may be applied to the refuge if economic thresholds are reached for one or more of these target pests. Contact local or regional professionals, such as your county extension agent, if you have questions regarding the economic threshold of target pests.
  - b. Bt-based microbial insecticides may not be applied to the corn refuges.
  - c. The *common refuge* corn acres can be treated for corn rootworm larvae and other soil pests with a soil-applied or seed-applied insecticide.

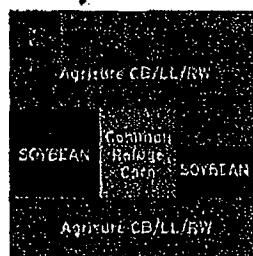
1. Insecticides labeled for control of corn rootworm adults can be applied to the *common refuge* provided the field with Agrisure CB/LL/RW hybrids is treated in a similar manner.
5. The *common refuge* should be planted with a hybrid that is agronomically similar to and managed similarly to your corn with Agrisure CB/LL/RW.
6. The *common refuge* should be planted in fields with a similar history as the Agrisure CB/LL/RW.
  - a. If the *common refuge* is planted in a field that is in a crop rotation system, the corn hybrids with Agrisure CB/LL/RW must also be planted in a field that is in a crop rotation system.
  - b. If the *common refuge* is planted on continuous corn, the corn hybrids with Agrisure CB/LL/RW may be planted on either continuous or in a crop rotation system.

#### **Corn Borer/Rootworm Common Refuge Configurations**

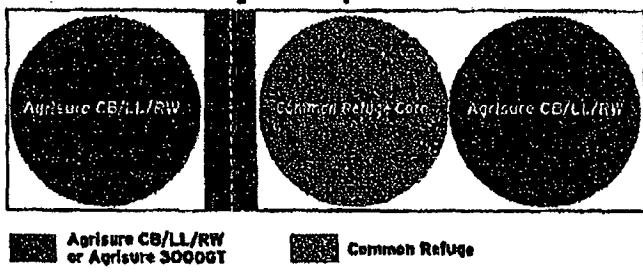
Examples of Refuge Configuration Options

##### **Adjacent Fields**

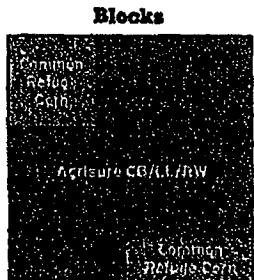
The refuge field is planted to only refuge hybrids and does not contain any corn hybrids with Agrisure CB/LL/RW or other trait products for controlling corn borers and/or corn rootworms. In these patterns the refuge must be planted in either an adjacent field or in fields separated by a road, path or ditch.



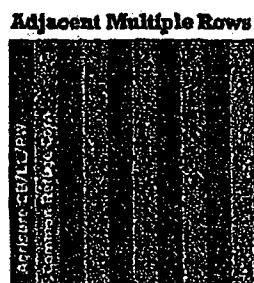
##### **Separated By a Road**



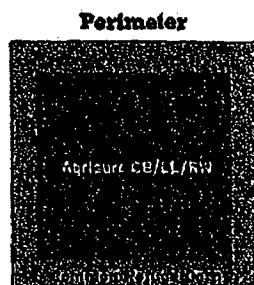
Refugee corn and corn hybrids with  
Agrisure CB/LL/RW are planted in  
large blocks in the same field.



Refugee corn strips must be at least 4  
rows (preferably 6 rows) wide.



Refugee is planted around the sides of the  
field. Requires planting a minimum of  
4 rows wide (preferably 6 rows) of  
refugee corn.



■ Agrisure CB/LL/RW  
or Agrisure 3000GT  
■ Common Refuge

### ***Separate Refuge Planting Requirements***

This option requires planting a *separate refuge* for corn borers and a *separate refuge* for corn rootworms.

- A *separate corn borer refuge* is a field or area of corn that does not contain Agrisure CB/LL/RW or other trait products for controlling BCI.
- A *separate corn rootworm refuge* is a field or area of corn that does not contain Agrisure CB/LL/RW or other trait products for controlling rootworm.

#### *Separate Corn Borer Refuge\**

1. A minimum of 20 percent of field corn acres must be planted to corn hybrids that do not control corn borer (the corn borer refuge may contain corn hybrids with Agrisure GT or conventional hybrids). If you plant corn hybrids with Agrisure CB/LL/RW in cotton-growing regions\*, you must plant a minimum of 50 percent refuge.
2. The corn borer refuge must be placed within one-half mile of corn hybrids with Agrisure CB/LL/RW; however, a one-fourth (1/4) mile distance is preferred.
3. The corn borer refuge corn acres may be treated with a non-Bt foliar insecticide for corn borer if economic thresholds are met.\*

#### *Separate Corn Rootworm Refuge\*\**

1. A minimum of 20 percent of field corn acres must be planted to corn hybrids that do not control corn rootworm (the corn rootworm refuge may contain corn hybrids that control corn borers, such as Agrisure CB/LL).

\*Please refer to the section Agrisure CB/LL Refuge Requirements beginning on page 7 for more detailed information, including specific requirements for cotton-growing areas.

\*\* Please refer to the section Agrisure RW Refuge Requirements beginning on page 11 for more detailed information.

2. Corn rootworm refuge planting options include blocks adjacent to Agrisure CB/LL/RW corn fields, perimeter strips or in-field strips.
  - a. The corn rootworm refuge must be planted within or immediately adjacent (e.g., across the road) to Agrisure CB/LL/RW corn fields.
  - b. Corn rootworm planted as in-field or perimeter strips must be at least 4 consecutive rows wide, but the preference is for 6 rows.
3. The corn rootworm refuge corn acres can be treated for corn rootworm larvae and other soil pests with a soil-applied or seed-applied insecticide. They may also be treated with a non-Bt foliar insecticide for late season pests; however, if corn rootworm adults are present, the field with Agrisure CB/LL/RW must be treated in a similar manner.\*\*

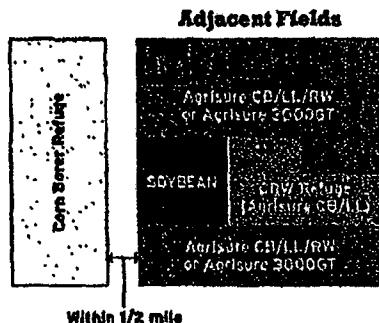
\*\* Please refer to the section *Agrisure RW Refuge Requirements* beginning on page 11 for more detailed information.

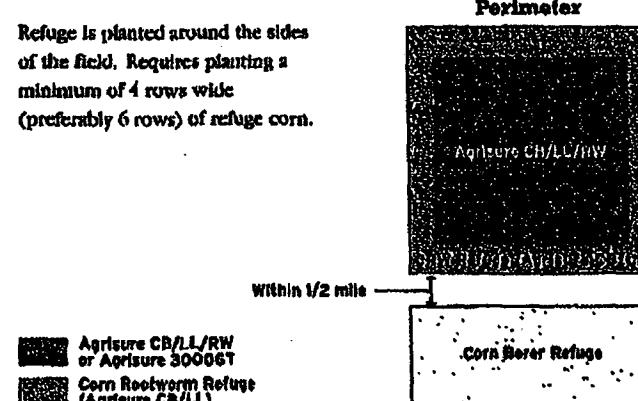
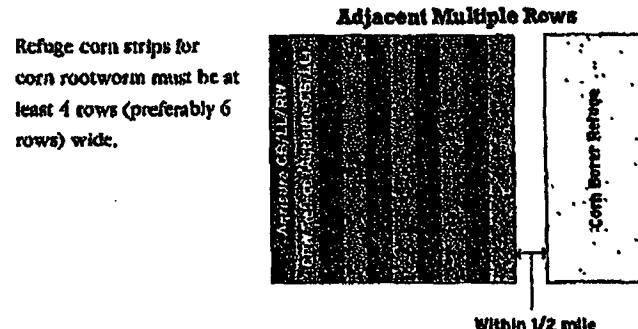
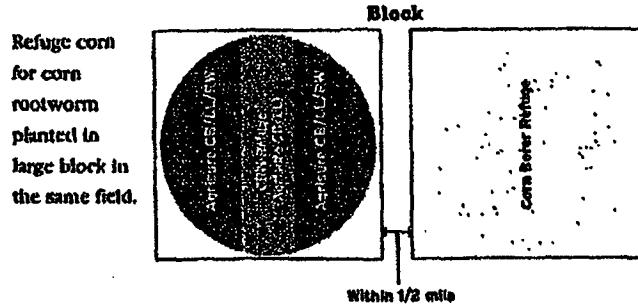
#### **Corn Borer/Rootworm Separate Refuge Configurations**

**Examples of Refuge Configuration Options**

- Agrisure CB/LL is planted as the refuge for corn rootworm
- The refuge field for corn borer is planted within 1/2 mile of the fields with Agrisure CB/LL/RW

The refuge field for corn rootworm is adjacent to or separated by a road, path or ditch.





- Agrisure CB/LL/RW or Agrisure 3000ST
- Corn Rootworm Refuge (Agrisure CB/LL)
- Corn Borer Refuge

### **Grain Marketing with Biotech Corn Traits**

All biotech corn trait events must be approved by the U.S. Department of Agriculture and the U.S. Food and Drug Administration before hybrids containing them can be planted. Pesticidal events also require approval of the U.S. Environmental Protection Agency. In addition, grain harvested from U.S.-approved hybrids can only be exported to nations that have authorized the event. It is the responsibility of the trait provider to obtain authorization, which is usually provided on a trait-by-trait basis. Hence many combinations of traits (stacks) require separate authorizations.

- Japan, currently the largest importer of U.S. grain, has granted several approvals for grain containing biotech corn traits in recent years, including GA21, Bt11 and MIR 604.
- European Union (EU) customers have significantly curtailed imports of whole grain to reduce the risk of importing corn containing unapproved biotech traits.
  - Currently, the primary U.S. corn shipped to the EU is corn gluten feed, a by-product from the corn wet-milling process.
  - Recently, the EU has approved processed feed containing many of the commercial traits sold in the U.S. market.
  - Exports of distiller's dry grain with solubles (DDGS), the co-product of dry-mill ethanol production, are beginning to find markets in the EU.
- To minimize the risk of grain with unapproved biotech traits entering the EU market, the U.S. corn seed industry developed a comprehensive program that educates and informs corn growers and grain handlers on the proper handling of harvested grain from hybrids containing these corn events.

**Market Choices**

- The Market Choices<sup>4</sup> logo is used on seed packaging and marketing materials to communicate to growers that grain harvested from these products is not approved in the EU.
- Growers must find a market for this grain that will not ship this grain or its processed products to the EU.

**Agrisure Traits Status\***

	U.S. Approval	EU Food Approval	EU Processed Feed Approval	Japan Approval
Agrisure® BT 1091	Yes	Yes	Yes	Yes
Agrisure® GT 1091	Yes	Not <sup>a</sup>	Not <sup>a</sup>	Pending
Agrisure® GT	Yes	Yes	Yes	Yes
Agrisure® GT 1091 (S. Italy)	Yes	Not <sup>a</sup>	Not <sup>a</sup>	Yes
Agrisure® 3000GT (S. Italy)	Yes	Not <sup>a</sup>	Not <sup>a</sup>	Pending
Agrisure® GTAW	Yes	Not <sup>a</sup>	Not <sup>a</sup>	Yes
Agrisure® BN	Yes	Not <sup>a</sup>	Not <sup>a</sup>	Yes

\* This event does not have whole grain import approval in the EU

<sup>a</sup> Grain harvested from corn hybrids containing these traits is not fully approved for grain export to the European Union. The grain must be directed away from export channels that supply the EU. For more information on your grain market options, contact your seed supplier.

† The above chart is current as of November 2007. For the most recent regulatory update status, visit [www.agrisuretraits.com](http://www.agrisuretraits.com).

### **Agrisure CB/LL**

Grain from Agrisure CB/LL hybrids is fully approved in the United States, Canada, Japan and Europe, and has no grain marketing or grain channelling restrictions.

### **Agrisure GT**

Grain from hybrids with Agrisure GT is fully approved in the United States, Canada and Japan. Whole grain from hybrids with Agrisure GT is not yet approved for human food and animal feed in the EU. Currently, Syngenta is working closely with the EU regulatory authorities to secure approvals for Agrisure GT and stacks with other Agrisure corn traits. In the interim, grain from hybrids with Agrisure GT must be marketed under the Market Choices program.

For 2008, the EU will accept corn gluten, corn gluten feed and distillers dry grain with soluble (DDGS) produced from grain harvested from hybrids containing Agrisure GT. Since these are the primary corn products shipped to the EU, growers have a variety of grain marketing options available to them. We recommend growers talk with their grain buyers about these options.

**Appropriate markets for corn harvested with Agrisure GT include:**

- On-farm feeding
- Domestic feed lots
- Grain handlers, feed mills, and dry grind ethanol plants that have agreed to accept grain awaiting EU approval

The American Seed Trade Association (ASTA) web site at [www.amseed.org](http://www.amseed.org) provides a list of grain handlers (Grain Handlers' Database) and their positions on accepting corn traits not yet approved by the EU.

This information can also be obtained by calling 1-866-SYNGENT.